DocuMaster MFC

User Operating Instructions

190-97 Rev. 1.0

Digital Finishing for Digital Printers

morgana

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CHAPTER 1 Introduction to the DocuMaster MFC

Thank you for choosing the DocuMaster MFC.

About Your Manual

This manual explains how to operate the DocuMaster MFC, correct and solve most error conditions and perform routine maintainence.

Operator training will be provided when the machine is installed, however it is recommended that you also take time to read this manual.

Safety Information

Safety information is included in “Safety Information” on page 85. *You are advised to read this information before you start to use the DocuMaster MFC.*

Installation

The installation of your DocuMaster MFC requires specialist knowledge and should therefore only be carried out by a supplier approved engineer.

Caution: *The DocuMaster MFC must only be plugged into an electrical supply line of the correct voltage and with a proven earth. Any damage caused by failure to do so will not be covered by the warranty. The required machine voltage is shown on the label on the rear of the DocuMaster MFC and the rear of the Booklet Maker.*

Getting Help

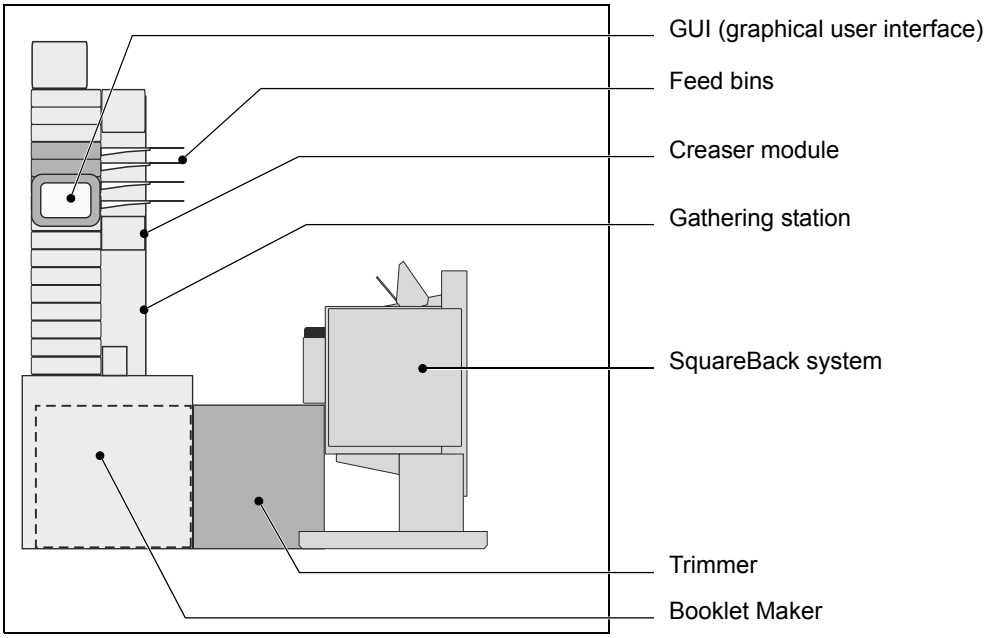
We are confident that your DocuMaster MFC will give many years of trouble-free production. If you have any queries or problems, in the first instance please refer to the problem solving section in this book. Should you require further assistance, please contact your supplier.

About the DocuMaster MFC

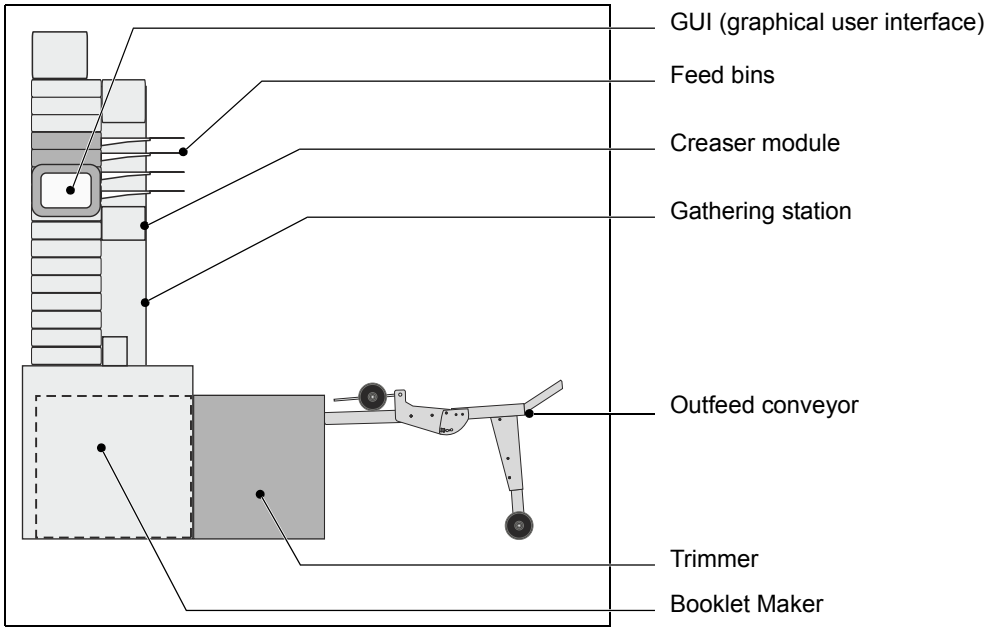
The DocuMaster MFC converts sets of printed pages into staple-folded booklets. It will also add a separate pre-printed cover if required. A creaser module can pre-crease any pages in the set to allow for heavier stock or digital printing.

The DocuMaster MFC typically consists of the following components:

- A GUI (Graphical User Interface) colour touch-screen that controls the operation of the DocuMaster MFC
- Feed bins, that are used to add covers or inserts to booklets where required
- A creaser module
- A gathering station, that gathers complete sets of pages
- A booklet maker that staples and folds the sheets into booklets
- A trimmer that trims the fore edge of the booklet
- An outfeed conveyor that connects to the trimmer
- The SquareBack system that post-processes booklets to give them the appearance of perfect binding with the security of a stapled spine. This is an optional module and is documented in a separate operating manual



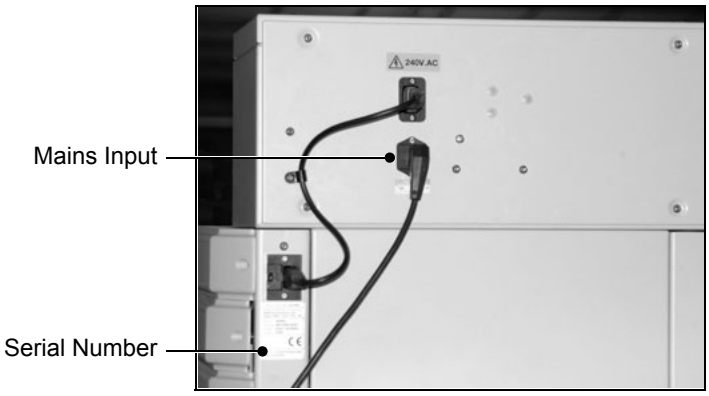
DocuMaster MFC with SquareBack system



DocuMaster MFC with outfeed conveyor

Switching the DocuMaster MFC On and Off

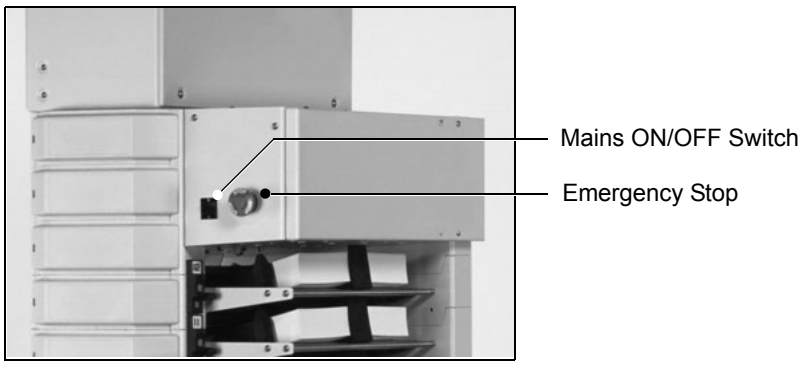
Mains Input. There are two mains inputs: one on the rear of the tower drive unit and one on the rear of the booklet maker. Two fuses are fitted next to each of the mains inputs.



DocuMaster MFC Mains Input

Booklet Maker Mains Input

Mains On/Off Switch. Mains On/Off switches are located on the side of the tower next to the emergency stop button, and alongside the booklet maker mains input. The mains On/Off switches should be used to turn the system on and off when required. When the system is switched off it retains the control panel settings in memory.



Important: *To maintain the efficiency and prolong the service life of the static elimination equipment, it is important to switch off the tower when it is not being used for a period of hours e.g. overnight.*

Emergency Stop

The emergency stop button should only be used when an immediate stop of the machine is required. Under normal circumstances the machine should be stopped by touching the stop button on the control panel. If the emergency stop button is used, the system will not restart until the button has been released by turning it clockwise.

CHAPTER 2 Using the DocuMaster MFC

This chapter provides details on how to use the DocuMaster MFC.

For details on the individual modules and how to adjust them, please refer to Chapter 3 on page 11.

Collating Sequentially Printed Sets

The DocuMaster MFC system can be used to automatically gather sets from a sequentially printed stack of paper. The sheets are held in the gathering station until the set is complete, and it is then released into the booklet maker and trimmer.

Preparation

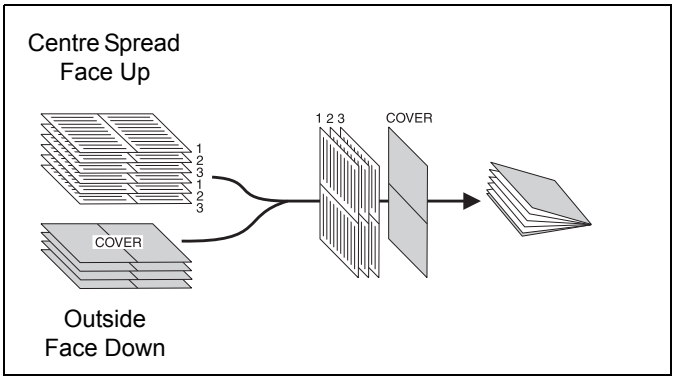
- Press **END JOB** to end the previous job.
- Press **INCH** to check that there are no sheets remaining in the conveyor.
- Clear any remaining sheets from the DocuMaster MFC system.

Tip: *Load the Default Template to return the control panel to its default factory settings:*

Touch **END JOB**
Touch **LOAD & SAVE**
Select the Default Template from the list of jobs
Touch **LOAD**
If asked, select **YES** *to confirm that you wish to load the Default Template*

Loading the Bins with Paper

Load the sheets so that the centre spread of the book is face up.



Finishing Sequentially Printed Sheets

- Load the bins and switch on, use bin linking if required.
- Adjust the feed bin settings to suit the paper type.

Inserting a Cover

If you wish to insert a separate cover it should be loaded into the lowermost bin with the outside face down. The other sheets are then loaded in the bin(s) directly above.

Adjust the Booklet Maker and Trimmer

- Adjust the booklet maker and trimmer for the paper size using the GUI control panel.
- Adjust the outfeed conveyor wheel.
- Select edge or centre stapling.
- Select which staple heads should be used and adjust their position if necessary.
- Adjust the fold roller gap.

Adjust the Gathering Station

- Adjust the gathering station for sheet width.
- Adjust for sheet length.
- Adjust the air blow if necessary.

Adjust the Creaser

- Adjust the creaser module as needed. See “Creasing Module” on page 46.

Starting the Job

- Touch **NUMBER OF SETS** in the **BATCH** window and input the number of sheets required in each book.
- To insert a cover, in the **BATCH** window, touch **INSERTS** and set **BOTTOM** to **ON** (the **NUMBER OF SETS** in the **BATCH** window must be set to 1 or greater)

- In the **BASIC** window, select **PRENUMBER**, and set the **SETS PER HOUR** to **AUTO**.

Test Set. A test set must be run at the start of each job. Touch ⏻ to run a test set. If **PRENUMBER** is selected, the test set is counted and the sheet should be left in the gathering station.

Tip: *To avoid wasting sheets during the test set, the sheets can be diverted out of the front of the gathering station using the manual bypass gate.*

Note: *If* **PRENUMBER** *is not selected, the test set is not counted, and the sheet should be removed from the gathering station and replaced in the feed bin.*

Note: *If a cover is being inserted, it is not fed during the test set. The calibration reading for the cover is automatically taken when the job is started.*

Touch ⏻ to run the job.

Once the machine is running, adjustments may be necessary depending upon the stock in use.

The machine can be stopped at any time by touching ⊙. Alternatively, to stop the machine when the current batch/set is complete, touch **STOP** in the **BATCH** window.

Normal Collating

Preparation

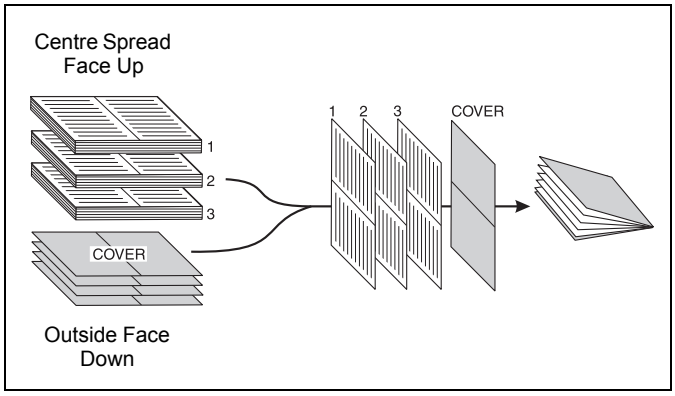
- Press **END JOB** to end the previous job.
- Press **INCH** to check that there are no sheets remaining in the conveyor.
- Clear any remaining sheets from the DocuMaster MFC system.

Tip: *Load the Default Template to return the control panel to its default factory settings:*

Touch **END JOB**
Touch **LOAD & SAVE**
Select the Default Template from the list of jobs
Touch **LOAD**
If asked, select **YES** *to confirm that you wish to load the Default Template*

Loading Sequence

Load the centre spread of the book face up in the uppermost bin (see below). The other pages should be loaded progressively downwards using as many bins as are required. The cover should be loaded into the lowermost bin with the outside face down.



Finishing Batch Printed Sheets

From the **BATCH** window, set the **NUMBER OF SETS** to **1**. This will feed one sheet from each active bin, and then open the latch in the gathering station to allow the set to travel into the booklet maker.

Adjust the Booklet Maker and Trimmer

- Adjust the booklet maker and trimmer for the paper size using the GUI control panel.
- Adjust the outfeed conveyor wheel.
- Select edge or centre stapling.
- Select which staple heads should be used and adjust their position if necessary.
- Adjust the fold roller gap.

Adjust the gathering station

- Adjust the gathering station for sheet width.
- Adjust for sheet length.
- Adjust the air blow if necessary.

Adjust the Creaser

Adjust the creaser module as needed. See “Creasing Module” on page 46.

Starting The Job

Touch ⏻ to run a test set. A test set must be run at the start of each job. Remove the resulting booklet from the outfeed conveyor and check that the sheet sequence is correct.

Touch ⏻ to run the job.

Once the machine is running, adjustments may be necessary depending upon the stock in use.

The machine can be stopped at any time by touching ⊙.

CHAPTER 3 About the Machine

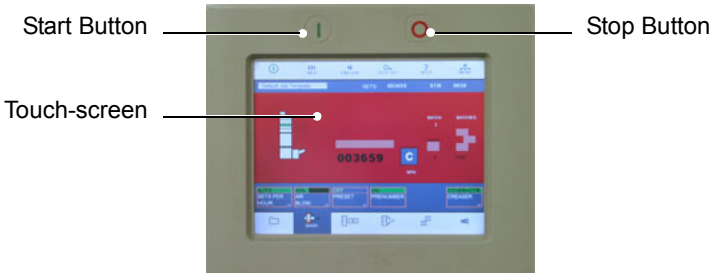
This chapter explains in detail about each of the different modules that make up your DocuMaster MFC, and how to make adjustments to them.

For instructions on using the DocuMaster MFC for production jobs, please refer to Chapter 2 on page 7.

Control Panel

Your DocuMaster MFC is fitted with a GUI (Graphical User Interface) control panel. The control panel has an 8.2" colour touch-screen, which offers a user-friendly interface for operators.

There are start and stop buttons mounted on the control panel's frame, these buttons are also repeated on the touch-screen.



GUI Control Panel

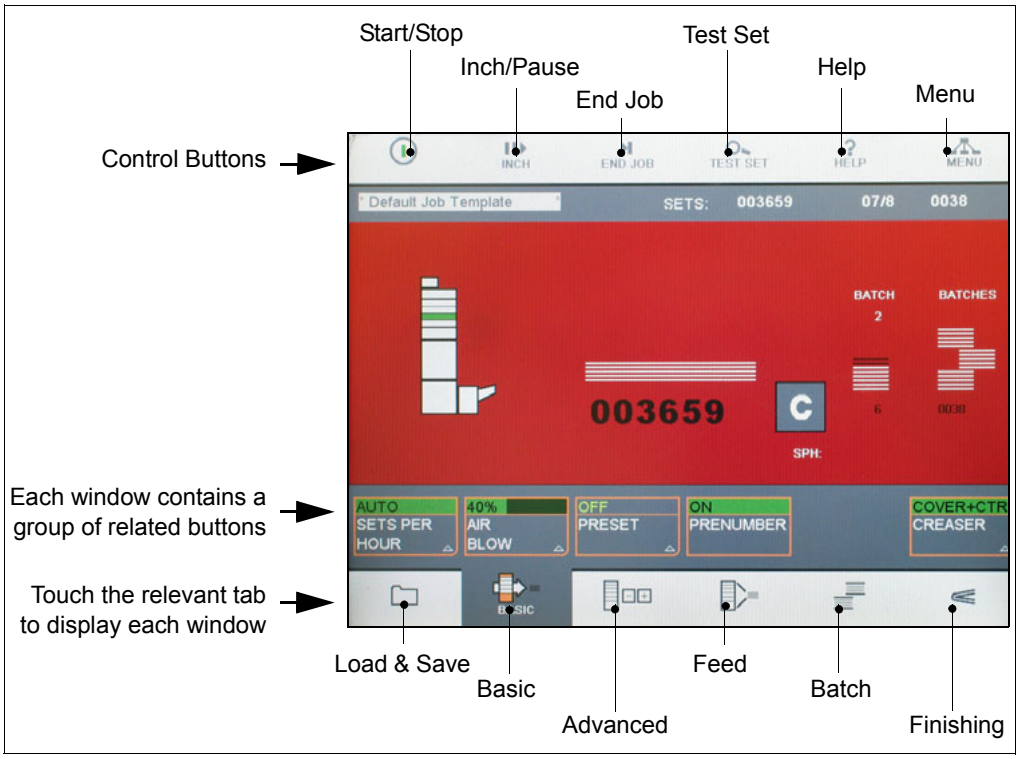
The touch-screen has a 'power save' function: if it is not used for a period of time, it automatically dims. After an extended period, it switches off. In either case, touch the screen to return it to normal.

Tip: *The touch-screen takes two or three minutes to reach full brightness when it is switched on.*

The Window System

The DocuMaster MFC is controlled by touching buttons on the control panel. The buttons are divided into groups that perform related functions. Each group of buttons has its own 'window' which is selected by touching the relevant tab:

- Load & Save
- Basic
- Advanced
- Feed
- Batch
- Finishing



Main Window Tabs on the Control Panel

'Control' Buttons

There are six main 'control' buttons listed across the top of the screen:

START/STOP ~ The ⏻ button starts the machine. When the machine is running, this button changes to ⏻ which stops the machine. These are duplicated by the start/stop buttons above the touch screen.

INCH ~ Touch and hold **INCH** to turn the conveyor. The conveyor will stop when **INCH** is released. This is used for clearing any sets remaining in the conveyor after a jam, etc.

When the machine is running, this button changes to **PAUSE**. Touch **PAUSE** to pause the feed for approximately 5 seconds, the conveyor continues to run. The pause time can be altered on the Machine Options page.

END JOB ~ Touch **END JOB** when you want to set the machine up for a new job, or alter an existing job. When a job is loaded, some of the machine settings cannot be changed, to prevent accidental changes. **END JOB** unlocks these settings.

This only affects settings that change the integrity of the job, e.g. the number of sheets in a set, or the number of sets in a batch.

TEST SET ~ When the test set icon is highlighted, the DocuMaster MFC is ready to run a test set. The DocuMaster MFC uses the test set to calibrate the system according to the stock in each bin. The test set is not counted by the counter (except when in prenumber mode). Once the test set is completed and is accepted by starting the machine, the bins and certain functions cannot be changed, to prevent errors and accidental button pushes.

To run a test set:

- Load the DocuMaster MFC.
- Touch the ⏻ button.
- The tower will feed a single sheet from each bin that is switched on and loaded.
- If an error occurred during the test set, or the bin loading is changed at this stage, touch ⏻ to run another test set.
- When the test set icon is grey, the machine is ready to run.

If either the **TEST SET** or **END JOB** button is touched, another test set will need to be run before the job can be restarted: the test set icon will be highlighted.

If you are having trouble running a job and false errors are being reported, it may help to run another test set. This can be done at any time to recalibrate the detector system.

HELP ~ Touch **HELP** and then touch any area of the screen to display the help text. Use the ‘up’ and ‘down’ arrows next to the text to scroll up or down the screen.

Some sections of help text have a ‘right’ arrow next to them. This indicates that there is more text available, explaining a related function in more detail. Touch the ‘right’ arrow to view this text. A ‘left’ arrow will then also appear: touch this to return to the previous text.

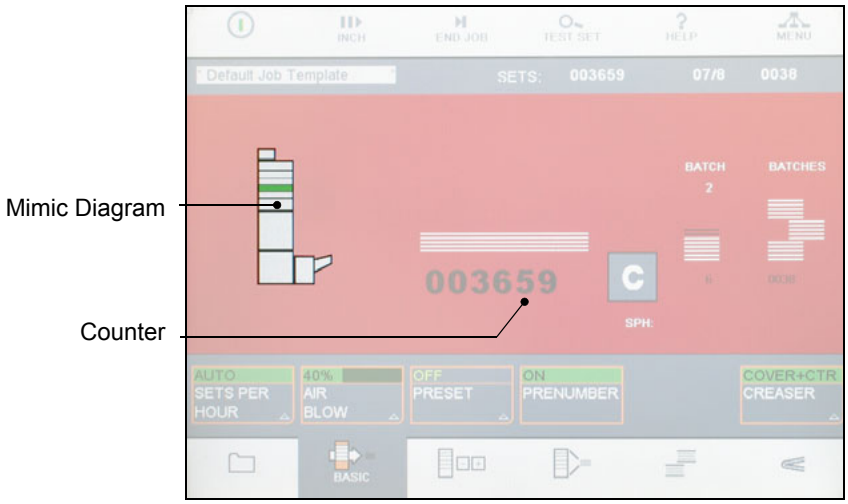
When you are viewing text, you can find out about any of the other tabs that remain on display by touching them. To exit the help text, touch **HELP** or **OK**.

MENU ~ MENU gives access to settings that do not need to be changed on a day-to-day basis. These settings include:

- Change the display language
- Toggle between metric and imperial measurements
- Adjust the screen contrast
- Adjust the pause duration

There are several access levels: some of the settings can only be changed by users with an appropriate access code.

MIMIC DIAGRAM ~ The mimic diagram of the DocuMaster MFC shown on screen is automatically created, based on how many bins are fitted and what finishing equipment is connected. Various areas on the outline will be highlighted in different colours, according to the DocuMaster MFC's operational status. The feed bin colours mimic the bin indicator lights:



- Steady green: This bin is selected, and is loaded with paper
- White: This bin is not selected
- Broken line between bins: These bins are linked
- Flashing green: This bin is selected, but it has run out of paper
- Flashing red: This bin has had a double feed, which has caused the DocuMaster MFC to stop. The error will be explained in a pop-up box
- Flashing yellow: This bin has had a miss, which has caused the DocuMaster MFC to stop. The error will be explained in a pop-up box

Booklet Maker and Trimmer:

- White: The booklet maker and trimmer are ready for use.

- Red: The booklet maker and trimmer are not ready. This may be caused by an open guard or full trim bin.

Errors in other modules are indicated in red.

C ~ Touching **C** resets the set counter to 0.

SPH ~ SPH shows the actual production speed of the DocuMaster MFC, in sets per hour. The production speed is affected by paper size, online finishing equipment and the job setup.

The 'BASIC' Window

The **BASIC** window contains settings that regularly need to be altered when setting up a new job.

'BASIC' Window.

SETS PER HOUR ~ SETS PER HOUR allows the production rate of the DocuMaster MFC to be set.

AUTO: Selecting **AUTO** allows the DocuMaster MFC to run at its maximum production speed according to paper size, online finishing equipment and the job setup.

SINGLE SET: Normally there will be more than one set in the conveyor at any one time. Touch **SINGLE SET** to allow only one set in the conveyor at a time. This minimises the correction required should an error occur. The sets per hour will automatically adjust to achieve this.

AIR BLOW ~ AIR BLOW alters the amount of air available for sheet separation in the feed bins. As a general rule, the heavier and larger the sheet, the more air you need. The default factory setting depends on the type of feed bins (25% for friction, 40% for SlimVAC).

If you are running mixed stocks on friction bins, individual air taps on each bin allow the air to be independently controlled.

PRESET ~ PRESET is used if an exact number of sets are required. Touch **PRESET** and enter the number of sets required on the number pad. The counter in the main area of the screen will turn white. When the machine is started the counter will automatically count down to zero and the DocuMaster MFC will then stop.

Touch ⏻ to restart the machine. The counter will revert to black and will count up to show how many 'overs' are produced.

The Preset function is ideal for producing a one-off batch. If you wish to produce several identical batches, it is easier to use the Batch function.

PRENUMBER ~ PRENUMBER is intended for use when collating pre-numbered carbonless sets. Touching **PRENUMBER** selects Single Set mode and causes the test set to be counted by the counter. It also prevents the operator from switching linked bins before one bin has emptied.

It is possible to switch off Single Set mode once Prenumber is selected. This allows the machine to run faster when using stock that feeds easily.

CREASER ~ *See "Creasing Module" on page 46.*

The 'ADVANCED' Window

The **ADVANCED** window allows advanced machine settings to be altered. These settings may be altered to optimise the quality and productivity of a job.

'ADVANCED' Window.

DRIVE SPEED ~ DRIVE SPEED alters the drive speed of the conveyor rollers and therefore the speed at which the sheets exit the DocuMaster MFC. This setting is independent from the **SETS PER HOUR** setting.

SHEET OFFSET ~ SHEET OFFSET shales the sheets as they exit the feed bins. This can assist the neat stacking of thick sheets or large sets. The range of offset is +/- 20mm between each sheet and affects all bins. The default sheet offset is 0: this causes the sheets in a set to enter the gathering base module with their leading edges level.

If an offset is required, it is usual for the bottom sheet of the set to lead: select a positive offset.

A small offset can make jogging more effective.

DETECTOR POSITION ~ The sheet detector measures 15.2mm (0.6") from the feed edge of the sheet and then takes a reading. If the edge of a particularly dark or solid area of print is in this area it can cause detection problems. The **DETECTOR POSITION** can be adjusted so that it looks at a different part of the sheet. This affects all the bins in the DocuMaster MFC.

TOLERANCE: Changing **TOLERANCE** to **x2 COARSE** allows for more variation in the detector readings. This prevents false errors being reported when there are variations in the paper or ink density. The default setting is **x1 NORMAL**.

The DocuMaster MFC allows for some variation in the paper or ink density, and constantly changes the range of values it will accept by working out an average value for previous sheets. Increasing Tolerance to **x2 COARSE** will only be necessary where there are larger variations in stock.

DOUBLE DETECTION: Under unusual circumstances, e.g. there are large variations in stock, it may be necessary to turn off **DOUBLE DETECTION**. This affects all the bins in the DocuMaster MFC. Miss feed detection is unaffected.

Before switching off double detection, first try setting **TOLERANCE** to **x2 COARSE**.

FEED CLUTCH ~ FEED CLUTCH adjusts the clutch feed length for all bins during the test set only. Increasing the value will cause the feed wheels or belt to drive the paper for longer, which can prevent sheets from slipping. The value can be reduced to prevent excessive pre-feeding of the next sheet in the bin.

Optimising the clutch feed length for non-standard paper lengths will produce a more accurate test set, which in turn should reduce errors during the job. The default value is 186.2mm (7.35") during the test set, thereafter the feed length is automatically set to suit the paper size.

AUTO: Touch **AUTO** to set the clutch feed length to the default value of 186.2mm (7.35").

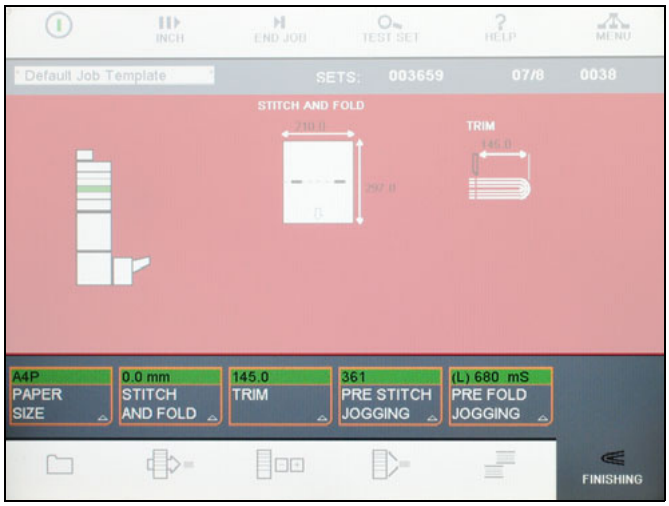
SUCTION HOLD ~ Increasing the **SUCTION HOLD** value causes the feeder to allow more time to pick up each sheet. If you are using stock that tends to stick

together, increasing the suction hold can improve paper pick-up and in some instances, separation.

It is possible to reduce the suction hold when using paper that is easy to feed: this will increase the operating speed of the machine. The default setting is 300mS.

The 'FINISHING' Window

The **FINISHING** window controls the settings for the booklet maker and trimmer.



'FINISHING' Window.

PAPER SIZE ~ Touch **PAPER SIZE** to alter the settings of the booklet maker and trimmer to suit the input paper size.

RE-REF: If you suspect the booklet maker or trimmer adjustment system is not calibrated correctly, touch **RE-REF** to re-reference the adjustment axes. The adjustment axes will return to the current settings once this is complete.

Periodically the DocuMaster MFC will automatically re-reference the axes during the setup procedure.

PAGE DIRECTION: Touching **PAGE DIRECTION** switches the orientation of the paper between landscape and portrait. This is only possible if the sheet does not exceed the maximum width accepted by the booklet maker.

PRESETS: Select from a choice of standard paper sizes by touching the **PRE-SET** window.

STITCH AND FOLD ~ The position of the stitch and fold can be offset relative to the centre of the paper. **STITCH AND FOLD** allows this position to be adjusted up to 20mm in either direction, in increments of 0.2mm.

STITCH: The **STITCH OFF** option will produce booklets that are folded, but not stitched.

STITCH POSITION: The **ON FOLD** option produces booklets which are stitched on the fold line. The **ON EDGE** option produces sets which are edge-stitched and folded.

The Edge/Centre Staple Selection Lever on the booklet maker must be in the centre-staple position (see p.39).

TRIM ~ Touch **TRIM** to set the finished book size after trimming. When a preset paper size is selected, this distance is automatically adjusted, but can be fine-tuned. The trim function can also be switched off.

PRE STITCH JOGGING ~ The **PRE STITCH JOGGING** window has options to alter the way sets are jogged prior to stitching. This ensures the finished booklets are as neat as possible. The maximum speed of the booklet maker will be reduced when any of the Pre Stitch Jogging options are selected.

PRE JOG: This provides additional jogging to the bottom of the set, when using heavy or large sheets. The booklet is stopped by the edge-stitch latch and jogged, before it drops to the stitch latch.

DOUBLE JOG: This provides additional jogging to the sides of the set, when using heavy or large sheets. The sidelays jog the set twice when it reaches the stitch latch.

STITCH DELAY: Increasing the **STITCH DELAY** value will cause a delay between the set arriving on the stitch latch and it being stitched. This allows more time for the sheets to settle. The default delay is 1mS.

PRE FOLD JOGGING ~ The **PRE FOLD JOGGING** window has options to alter the way sets are jogged prior to folding. This ensures the finished booklets are as neat as possible.

SIDE JOG HOLD: When **SIDE JOG HOLD** is selected, the sidelays hold the set during both stapling and folding without releasing. This is useful if the booklet is not being folded square, however it is essential that the sheet width is set accurately.

FOLD DELAY: This can be adjusted to alter the delay between the set arriving on the fold latch and being folded. This is useful if the booklet is not being folded square, and allows more time for the sheets to settle. The default delay is 180mS. The maximum production speed of the booklet maker will be reduced if the delay is increased.

The ‘LOAD & SAVE’ Window

The **LOAD & SAVE** window allows job settings to be saved and reloaded at the touch of a button. Each job is given a name, and the jobs are listed on the screen. To select a job, highlight it by either touching it or by using the up and down arrows

’LOAD & SAVE’ Window.

SAVE ~ Touch **SAVE** to save the current settings of the DocuMaster MFC. When the on-screen keyboard appears, enter the job name and then touch **OK** or **CLOSE**. The new job will appear in the list of saved jobs. This allows the settings to be recalled in the future, which saves set-up time.

REPLACE: If an existing job has been loaded and modified, touching **REPLACE** will replace the old job with the modified version.

CANCEL: Touch **CANCEL** if you do not wish to save a job that you have modified.

SAVE NEW: If an existing job has been loaded and modified, touching **SAVE NEW** will save the modified version as a new job. When the on-screen keyboard appears, enter the new job name and then touch **OK** or **CLOSE**. The original job is unchanged.

If the job name is not changed before touching **OK** or **CLOSE**, the job will be saved with the current name, suffixed by an asterisk.

JOB DETAILS ~ Touching **JOB DETAILS** shows the settings for each saved job. Select the job that you wish to view from the job list and touch **JOB DETAILS** to see a summary of the job settings.

LOAD ~ To load a job, select it on the job list using the up and down arrows or by touching it. Touch the **LOAD** button. You must touch **END JOB** before loading a job.

PADLOCK SYMBOL ~ The padlock symbol is used to lock and unlock saved jobs. Each saved job has a small padlock symbol next to it, to show whether it is locked or not. To lock or unlock a job, select it on the job list and touch the large padlock button.

Some padlock symbols may be greyed out. This is because there are several access levels to the system, which can be used to prevent jobs being altered.

DELETE ~ To delete a particular job it must be unlocked. Select the job from the job list using the up and down arrows or by touching it. Touch and hold **DELETE**. A red bar will appear, filling from left to right. Continue to hold until the red bar reaches the right-hand side.

VIEW OF JOB LIST ~ VIEW OF JOB LIST alters the order in which saved jobs are listed, either alphabetically or most recent first.

There is a line between Factory Template jobs, and other jobs saved by the operator. The Factory Template jobs are always listed first: only the operator-saved jobs can be reordered.

A->Z: To list jobs alphabetically, touch **A->Z**.

BY USE: To list jobs in the order they were last used, touch **BY USE**. The job that was run most recently will appear at the top of the list.

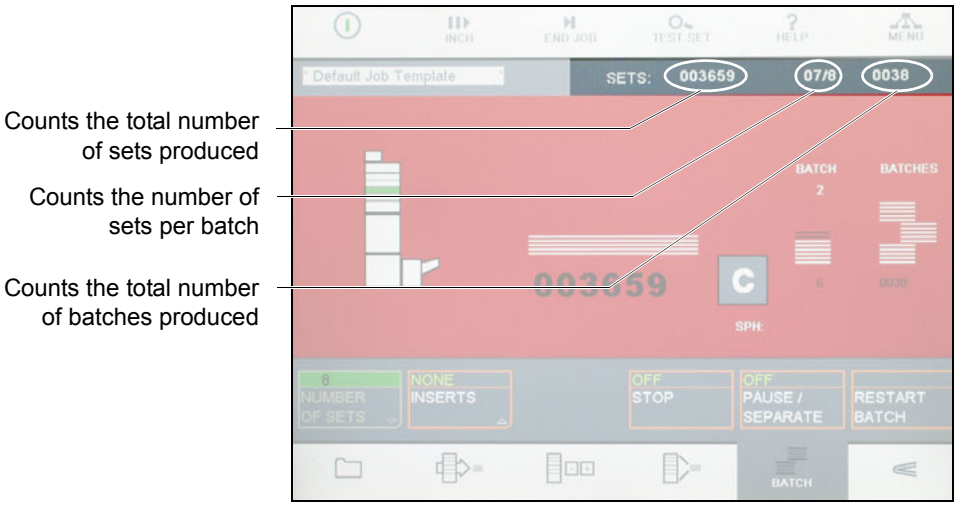
The 'BATCH' Window

The **BATCH** window allows sets to be grouped into batches, with an action at the end of each batch (stop, pause, oscillate or insert sheets).

'BATCH' Window.

NUMBER OF SETS ~ Touch **NUMBER OF SETS** to enter the number of sets in each batch. Entering **0** on the keypad will turn the batch mode off

Note: A 'set' is a feed cycle. When making booklets from sequentially printed (i.e. electronically collated) sheets, a 'set' will be a single sheet. In this case, enter the number of sheets in the document.



Batch Counter.

INSERTS ~ INSERTS allows sheets from the top bin and/or bottom bin to be inserted at the beginning or end of each batch.

If the inserted sheet is not part of the job, i.e. it is being used purely as a batch separator, it can be fed from either the top or bottom bin.

TOP: Select **TOP** to feed a sheet from the top bin with the first set of each batch. The inserted sheet will be at the bottom of the batch pile, as the backing board for a pad for example.

BOTTOM: Select **BOTTOM** to feed a sheet from the bottom bin with the last set of each batch. The inserted sheet will be at the top of each batch pile, athe cover sheet of a pad for example.

STOP ~ STOP causes the machine to stop after each batch, and the counter display will flash. Touch the start button to run another batch.

If **STOP** is selected while the machine is part-way through collating a batch, it will stop once it has completed that batch. This allows the operator to interrupt a job at a convenient point.

PAUSE / SEPARATE ~ PAUSE / SEPARATE causes the machine to pause for approximately 5 seconds after each batch. The pause icon on the control panel will flash between batches.

This function will also separate batches on a booklet maker outfeed conveyor. The pause time can be altered on the Machine Options page (touch **MENU, MACHINE OPTIONS**).

RESTART BATCH ~ Touching **RESTART BATCH** zeros the batch counter, so that you can restart a batch. Note that if the tower is running, this button will interrupt a batch that is partly completed, and a new batch will be started.

The 'FEED' Window

The **FEED** window contains the Mixed Feed option. With this option the tower can be programmed to feed in selective or special sequences.

'FEED' Window.

MIXED FEED ~ By using **MIXED FEED**, special feed sequences can be programmed. Each column represents a stage in the collating cycle. Up to twelve stages can be programmed. The tower will complete each stage in turn and then repeat the cycle.

Use the left/right arrow keys to navigate to the required stage. Use the up/down arrow keys to navigate to the required feed bin. Touch the 'enter arrow' to switch on. Use the + and - keys to enter the number of feeds in each stage. Touch O to switch on. Switch off after use.

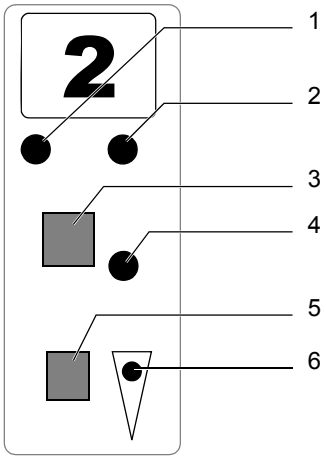
Friction Feed Bins

The DocuMaster MFC has four bins: 1 x Friction and 3 x SlimVAC suction feed bins.

For operation of SlimVAC bins please refer to “SlimVAC Suction Feed Bins” on page 28.

Bin Controls and Indicators

Feed bins are numbered from 1 upwards, with the bottom bin being bin 1. Each bin has its own controls immediately alongside it.



Key

Item	Description	Function
1	Red light	Indicates a double feed (slow flash indicates the bin sensor is ‘overrange’, see p.27)
2	Yellow light	Indicates a miss feed
1 & 2	Red and yellow lights	Indicate a feed jam or trailing sheet
3	Red button	Bin on/off switch
4	Green light	Indicates the bin is switched on
	Green flashing light	Indicates the bin is switched on, but needs loading
5	Grey button	Bin linking switch (see p.27)
6	Small lower green light	Indicates the bin is linked to the one below

Tray Extenders

For large sheet sizes (over A4, 8½ x 11") or when running A4 (or 8½ x 11") portrait it will be necessary to fit tray extenders to support the sheets.

One B3 (14¼ x 20¼") tray extender is supplied as standard with each Friction bin.

An optional tray extender is available for running A4 portrait (8½ x 11").

Loading the Bins. Slide the stock into the bin between the sidelays. Push in the sidelays to centralise the paper in the bin and so that they hold the paper securely.

Switching Bins On & Off. Before a test set is produced, individual bins will automatically switch on and off as they are loaded and unloaded. Bins can also be manually selected by pressing the red button alongside the bin. In addition, loading the Default Template will switch on all loaded bins. Remember that bins cannot be switched on or off when the system is locked (touch **END JOB** if necessary).

Adjustments

Adjustments for paper type and/or size include control over the amount of tray pressure and the amount of separator pressure.

Separator Pressure. Increasing the separator pressure acts like a brake, making it more difficult for a second sheet of paper to pass the separator pad. Too little separator pressure will result in double feeds, too much will result in miss feeds or damage to the feed edge of the paper.

The ideal separator pressure will depend upon the stock in use. Initially set the lever to its mid-position. To increase separation, move the lever downwards one notch at a time, and to decrease separation move the lever upwards one notch at a time.

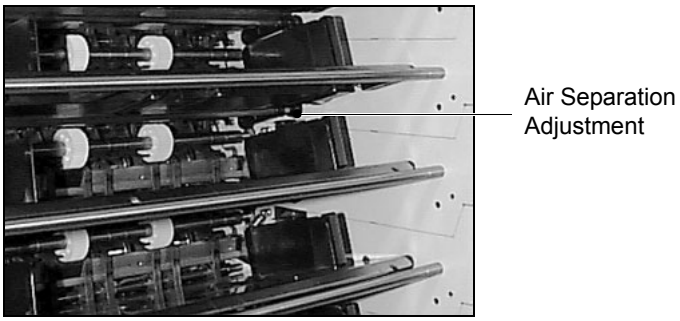
Moving the lever to its highest position disengages the separator. This position is used for the improved feeding of heavy cardstocks.

Tray Pressure. Increasing the tray pressure gives the feed wheels greater force on the paper; too much will result in double feeds and increases the possibility of scuffing the paper.

The ideal pressure will depend upon the stock in use. Always use the least pressure possible. The lever has five positions and is adjusted by gently pushing downwards whilst sliding the lever in or out. The innermost position gives minimum pressure. Initially set the pressure to minimum for small stock. For large sheets (i.e. if tray extenders are used) initially position the lever one notch out.

Air Separation. Air directed from the right hand sidelay is used to separate the top sheets of paper in the stack. The overall air level is adjusted if required by altering the **AIR BLOW** value, in the **BASIC** window (see p.15). The air level is also adjustable on each individual bin via a tap on the right hand sidelay.

The tap on the sidelay controls the air level into the side of the paper stack. The tap has three positions. The default position is 90° to the sidelay which provides 100% air. Moving the lever one notch towards you provides 50% air. Moving the lever towards you so that it is parallel with the sidelay shuts off the air.



Too much air into the side of the stack can cause the paper to skew as it feeds. Any bins that are not being used should have the air tap shut off on the sidelay to preserve overall system air. Remember to open the tap when the bin is next used.

Bin Linking

If required, two or more feed bins may be linked to operate as a single bin. When one runs out of stock, the next bin in the linked group will automatically take over. This allows reloading without stopping the machine. Bin linking can only be enabled when the bins are unlocked i.e. when the **TEST SET** icon is highlighted on the control panel. Press the grey button on the upper bin to link it with the one below. This will be indicated by the small green light. The mimic diagram on the control panel will show a broken line between bins that are linked.

By pressing the red bin on/off button it is possible to select which bin in the linked group is active.

If the system is locked, pressing the grey button on any bin will indicate which bins are in the same linked group.

Sensor Overrange

Sensor overrange is indicated after the test set by a slow flashing red light on the bin in question.

Particularly heavy or opaque stock may cause the bin sensor to go ‘overrange’. This means that the sheet is too optically dense for the sensor to ‘see’ through it. Double feeds will not be detected but misses, trailing sheets and jams will be detected as normal.

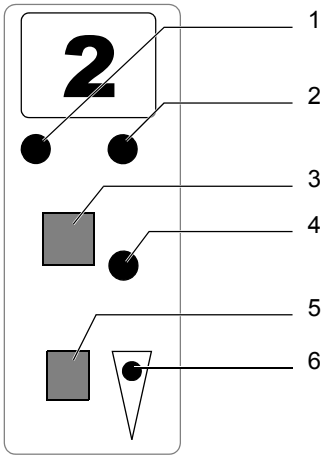
SlimVAC Suction Feed Bins

The DocuMaster MFC has four bins: 1 x Friction and 3 x SlimVAC suction feed bins.

For operation of Friction bins please refer to “Friction Feed Bins” on page 24.

Bin Controls and Indicators

Feed bins are numbered from 1 upwards, with the bottom bin being bin 1. Each bin has its own controls immediately alongside it.



Key

Item	Description	Function
1	Red light	Indicates a double feed (slow flash indicates the bin sensor is ‘overrange’, see p.32)
2	Yellow light	Indicates a miss feed
1 & 2	Red and yellow lights	Indicate a feed jam or trailing sheet
3	Red button	Bin on/off switch
4	Green light	Indicates the bin is switched on
	Green flashing light	Indicates the bin is switched on, but needs loading
5	Grey button	Bin linking switch (see p.31)
6	Small lower green light	Indicates the bin is linked to the one below.

Tray Extenders

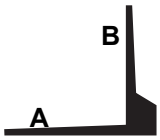
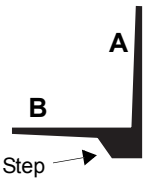
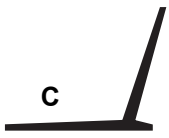
For large sheet sizes (over A4, 8½ x 11") or when running A4 (or 8½ x 11") portrait it will be necessary to fit tray extenders to support the sheets.

One B3 (14¼ x 20¼") tray extender is supplied as standard with each SlimVAC bin.

An optional tray extender is available for running A4 portrait (8½ x 11").

Rubber Endlays

Rubber endlays are used to control the paper stack in the tray. Two different types are supplied with the machine. It is important that the correct endlay is used in the correct orientation for the paper size in use. Do not push the endlay hard up against the edge of the paper stack. Incorrect usage may result in either misfeeds or double feeds.

	330-351 	When the rubber endlay will sit on the tray extender, position it so that 'A' is underneath the paper stack.
	330-351 	When the rubber endlay will sit on the bar across the front edge of the bin, position it so that 'B' is underneath the paper stack and the step is on the bar.
	330-446 	When the rubber endlay will sit within the bin itself, use the special endlay 330-446. Position it so that 'C' is underneath the paper stack.

Loading the Bins

Place a full stack of paper between the two sidelays in the base of the tray. Maximum capacity is achieved when the paper is slightly below the top of the sidelays. Slide the sidelays inwards to centralise the paper.

Position the rubber endlays on each tray at the end of the paper stack. The endlay should be underneath and just clear of the edge of the paper (by about 1mm, 1/16”).

> **Note:** *When using the DocuMaster MFC to collate small sheet sizes, make sure the tray loaded sensor is not covered by the rubber endlay.*

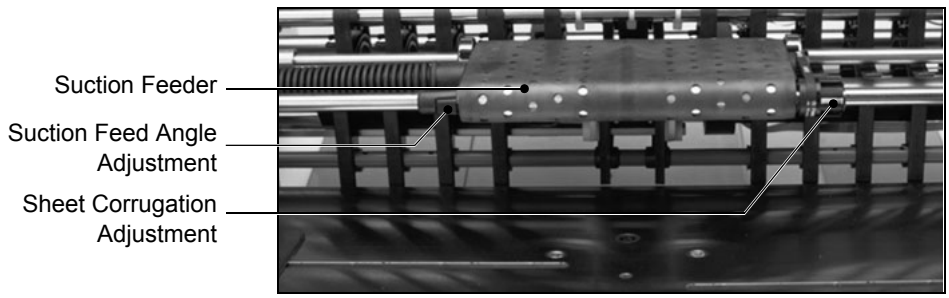
The paper tray raises automatically when the system initially starts and thereafter when the tray is loaded. It is therefore important to load a full stack of paper at a time. The tray automatically lowers either when the tray is empty or when ⊙ is pressed after the machine stops for any reason.

Switching Bins On & Off

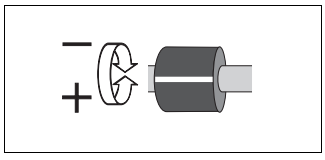
Before a test set is produced, individual bins will automatically switch on and off as they are loaded and unloaded. Bins can also be manually selected by pressing the red button alongside the bin. In addition, loading the Default Template will switch on all loaded bins. Remember that bins cannot be switched on or off when the system is locked (touch **END JOB** if necessary).

Adjustments

There are three adjustments to the feed system which allow the feeding of a wide range of papers.



Sheet Corrugation. The profile of the suction feeder can be adjusted to provide varying amounts of corrugation in the sheet. Greater corrugation gives greater separation; less corrugation gives less separation.

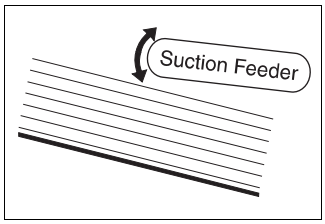


Adjustment is via the knob on the right hand side of the suction feeder. The indicator line on the knob shows the degree of adjustment. The knob is infinitely adjustable between the limits of its travel. When the indicator line on the knob is

in the fully up position there is no added sheet separation. The fully down position produces maximum separation.

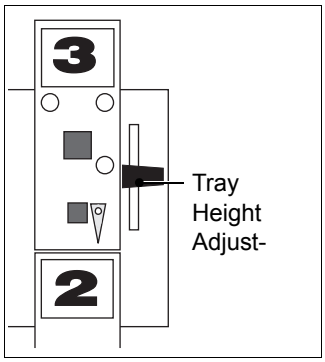
In general the heavier the sheet the less added separation is required. The mid position is suitable for most paper types and should be used as a starting point if in doubt for initial running.

Feeder Angle. The angle between the feeder and the paper can be adjusted to allow the feeding of particularly heavy and/or curled stocks.



Adjustment is made using the knob on the left hand side of the suction feeder. Turning the knob one stop in either direction has the effect of raising or lowering the outer edge of the feeder. Continuing to turn the knob will alternate between the two positions. The default position is down.

Tray Height. The tray height is adjusted via the lever on the SlimVac bin controls. Moving the lever downwards progressively lowers the paper tray. This increases the distance between the top of the paper stack and suction feeder, and also simultaneously adjusts the flow angle of the air separation.



The default position for the lever is the mid position which should be suitable for the majority of stock ranges.

Note: *When lowering the tray height, the change will only take effect the next time the tray raises (i.e. after reloading or restarting).*

Bin Linking

If required, two or more feed bins may be linked to operate as a single bin. When one runs out of stock, the next bin in the linked group will automatically take over. This allows reloading without stopping the machine. Bin linking can only be enabled when the bins are unlocked i.e. when the **TEST SET** icon is highlighted on the control panel. Press the grey button on the upper bin to link it with the one below. This will be indicated by the small green light. The DocuMaster MFC mimic diagram on the control panel will show a broken line between bins that are linked.

By pressing the red bin on/off button it is possible to select which bin in the linked group is active.

If the system is locked, pressing the grey button on any bin will indicate which bins are in the same linked group.

Sensor Overrange

Sensor overrange is indicated after the test set by a slow flashing red light on the bin in question.

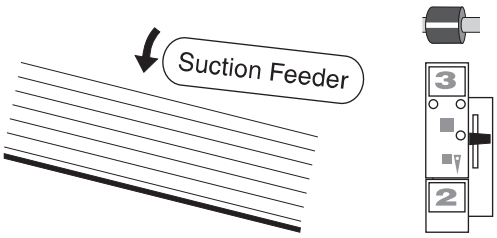
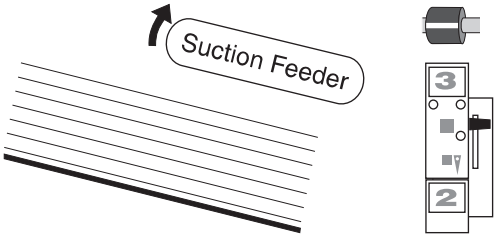
Particularly heavy or opaque stock such as a straw board backing sheet may cause the bin sensor to go ‘overrange’. This means that the sheet is too optically dense for the sensor to ‘see’ through it. Double feeds will not be detected but misses, trailing sheets and jams will be detected as normal.

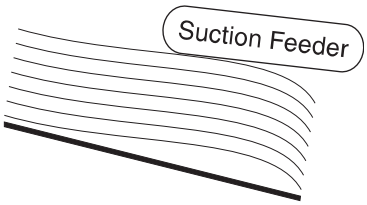
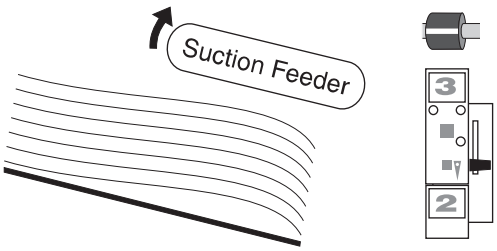
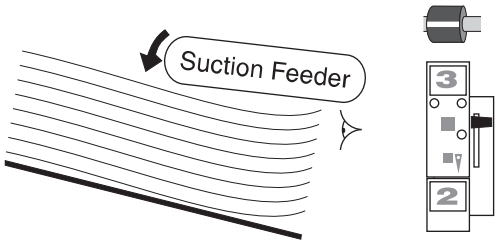
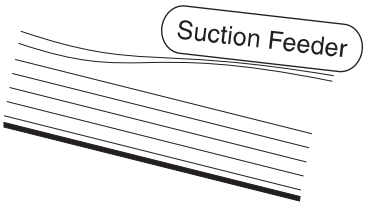
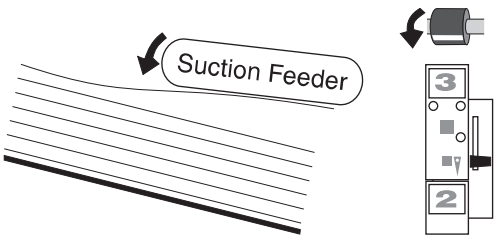
Difficult Papers

Whenever feed difficulties are encountered we recommend that you follow two basic guidelines:

- Switch off all the bins except one. This allows you to concentrate fully on the feed of a single bin
- Ensure that only one 'remedy' is tried at a time. This will make it much easier to identify the solution

The following suggested settings are a recommendation only. Paper characteristics vary and therefore any particular stock may require settings different to those shown.

Paper Condition	Recommended Settings
Standard Settings • Suction Feeder angled down • Tray height in mid-position • Sheet corrugation in mid-position	
Heavy or Rigid Stock Heavy or rigid stock or board may be unable to bend sufficiently to meet the suction feeder in its lower position.	 • Raising the angle of the suction feeder reduces the feed angle • Raise the tray height

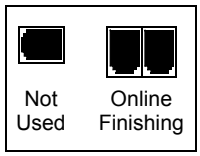
Paper Condition	Recommended Settings
Stock Curling Down  The stock is too close to the feeder for air to get in between the sheets.	 • Lowering the tray height will increase the space between the feeder and the sheets • If necessary, increase the feeder angle also
Stock Curling Up The upward curl means the tray height detector will 'see' the paper before it is close enough to the feeder.	 • Raise the tray height to lift the paper stack closer to the feeder
Lightweight Porous Papers  The feeder may suck through one sheet and onto the next, resulting in double feeds.	 • Increase sheet corrugation • Lower the tray height to increase the distance between the feeder and the paper stack

Gathering Station

The gathering station holds the sheets, which have been delivered from the feed bins, until the set is complete. The set is then released into the booklet maker.

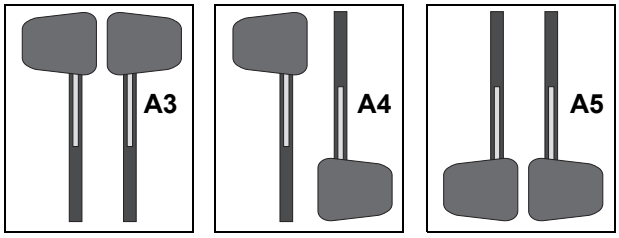
Interface Sockets

The interface sockets are located on the right underside of the gathering station. There are three sockets in all. Two identical sockets (either one of which is used to connect the booklet maker) and one smaller socket that is currently not used.



Sheet Length Adjustment

Select the correct paper size using the two levers on the front of the DocuMaster MFC (see below). For non-standard paper sizes, use the setting for the next largest standard paper size.

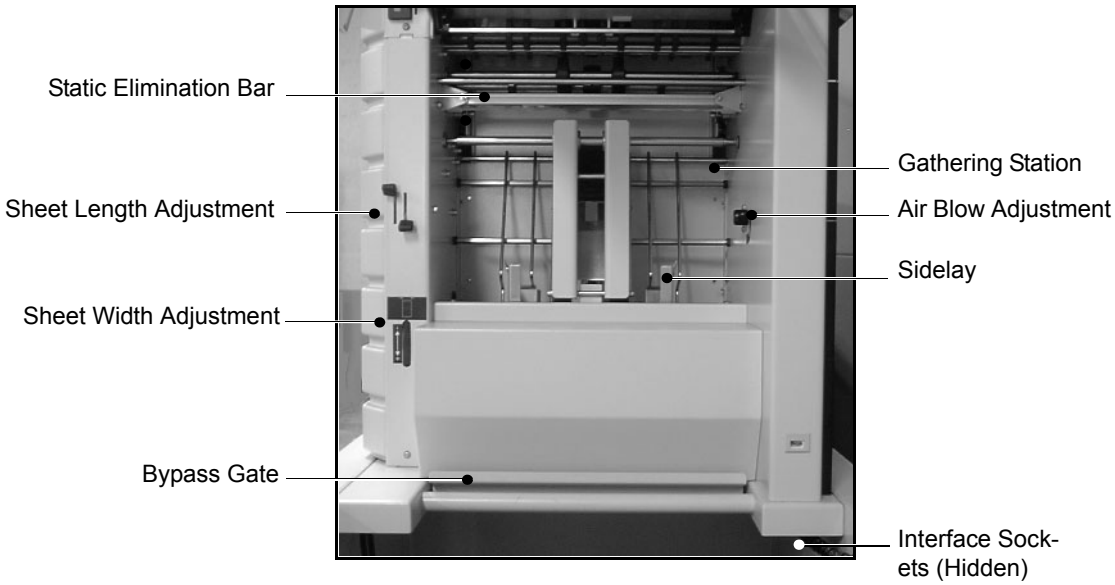


Sheet Length Adjustment

Sheet Width Adjustment

Insert a few sheets from the job in between the sidelays. Turn the thumbwheel until the marker aligns with the correct point on the scale. Firmly push the side-

lays inwards to check the tamper position, they should just touch the paper. Make further adjustment if necessary.



Air Blow Adjustment

An air jet is used to prevent sheets in the gathering station from curling forwards. This can be adjusted using the air blow adjustment tap on the side of the gathering station.

Manual Bypass Gate

When the gathering station releases the sheets, they are delivered into the booklet maker. To bypass the booklet maker, pull out the manual bypass gate and the sheets will be delivered out of the front of the gathering station, above the booklet maker. This is useful to avoid wasting sheets during the test set.

Note: *The manual bypass gate only works when the DocuMaster MFC is already running. Start the machine first, and then pull it out.*

Booklet Maker & Trimmer

The booklet maker and trimmer staple, fold and trim the printed sheets to form a booklet. Finished booklets are delivered onto the outfeed conveyor.

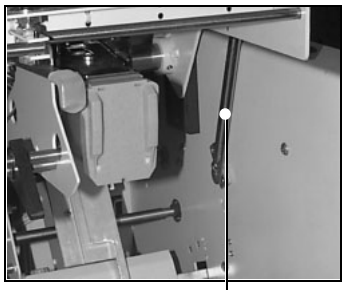
The booklet maker fits underneath the DocuMaster MFC tower. It is wheel-mounted and can be pulled in and out when required.

Opening the Booklet Maker & Trimmer

Access to the inside of the booklet maker is necessary for changing the staple cartridge, adjusting the staple heads, and clearing paper jams. Access to the inside of the trimmer may be necessary for clearing paper jams.

The booklet maker and trimmer lids incorporate safety switches which automatically cut the power when the lid is opened.

The booklet maker lid can be opened by turning the handle to the left and lifting. The lid is supported by a strut on the right side.



To close the booklet maker lid, lift it slightly, push the support strut inwards and close the lid. Turn the handle to the right to lock in place.

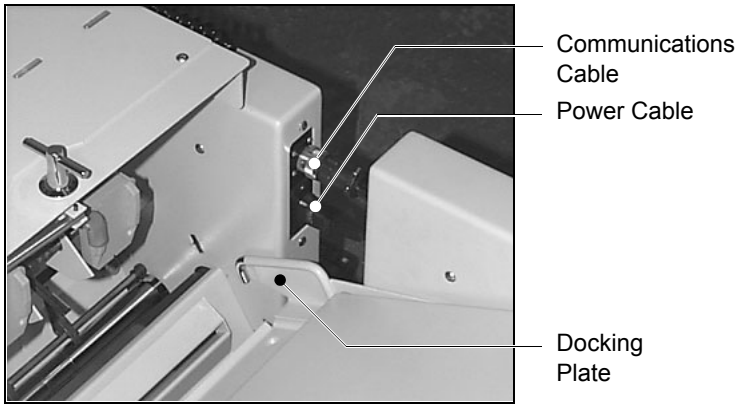
The trimmer lid can be opened by lifting the orange hand screw.

Connecting the Booklet Maker & Trimmer

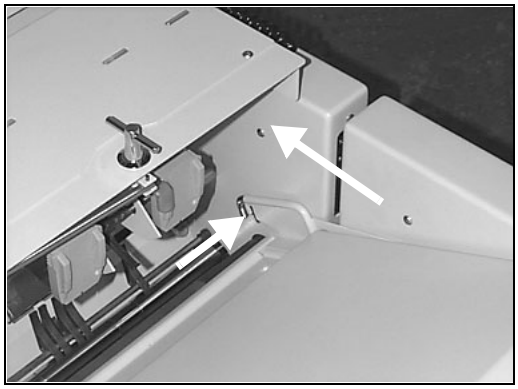
The booklet maker and trimmer will be connected together when the DocuMaster MFC is installed. However, it may be necessary to separate them when moving the units or when clearing paper jams.

Disconnecting the Booklet Maker and Trimmer. Open the booklet maker lid. Disconnect the communications and power cables and wheel the booklet maker and trimmer units apart.

Connecting the Booklet Maker and Trimmer. Line up the trimmer docking plates with the booklet maker. Re-connect the power and communications cables to the sockets on the booklet maker.



Push the two units together so that the hooks on the trimmer docking plates align with the holes in the booklet maker side plates.



Close the booklet maker lid and turn the handle to the right to lock the trimmer in place.

Starting and Stopping the Booklet Maker

The booklet maker and trimmer automatically start and stop when required. After the tower stops, there is a delay of approximately 10 seconds before the booklet maker stops.

For an immediate stop, either press the Emergency Stop button, or open the lid on either the booklet maker or trimmer.

Tip: *If you need to start the booklet maker and trimmer without starting the tower, touch* **INCH**. *It will automatically shut down 10 seconds after its last action.*

Status Indicator Light

The yellow indicator light on the top left surface of the booklet maker shows the status of the unit.

Indicator Light Mode	Booklet Maker Status
Blinking once per second	The unit is ready to run
Constantly illuminated	The unit is running
Blinking rapidly	There is a jam or other error
Not illuminated	Booklet Maker or trimmer lid is open, paper is stuck in the paper path or the unit is not switched on

Staple Head Indicator Lights

The red indicator lights on the booklet maker lid show the status of the corresponding staple head.

Indicator Light Mode	Staple Head Status
Blinking once per second	The staple cartridge is about to or has run out
Constantly illuminated	The staple head is selected and ready to run
Blinking rapidly	There is a staple head jam or other error
Not illuminated	The staple head is not selected

Refer to “Changing the Staple Cartridge” on page 58 for details on changing the staple cartridge.

Adjustment for Paper Size

Adjustment for paper size is made on the GUI (Graphical User Interface).

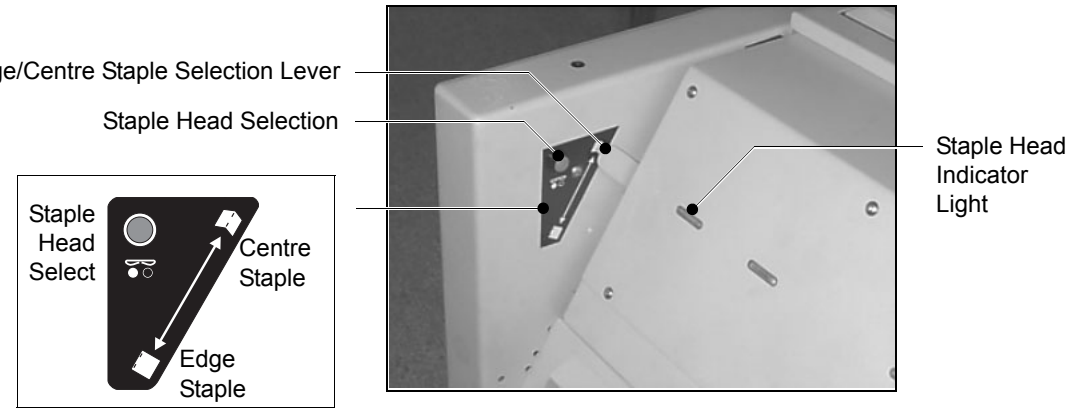
- Touch **FINISHING** to display and adjust the booklet maker settings
- Touch **PAPER SIZE**, **PRESETS** and select a standard sheet size - A3, A4 or A5 (11x17", 8.5x11" or 5.5x8.5")
- Choose **PORTRAIT** or **LANDSCAPE** in the **PAPER SIZE**, **PAGE DIRECTION** window
- For non-standard paper sizes, touch **PAPER SIZE** and then use the ‘**+**’ and ‘**-**’ keys to set the size

Note: **PORTRAIT** *is the normal setting for booklet making.*

Tip: *Remember that you can recall the settings from previously stored jobs in the* **LOAD & SAVE** *window.*

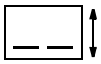
Select Edge or Centre Stapling

Use the Edge/Centre Staple Selection Lever to select centre staple operation (lift up) or side/corner staple operation (push down).



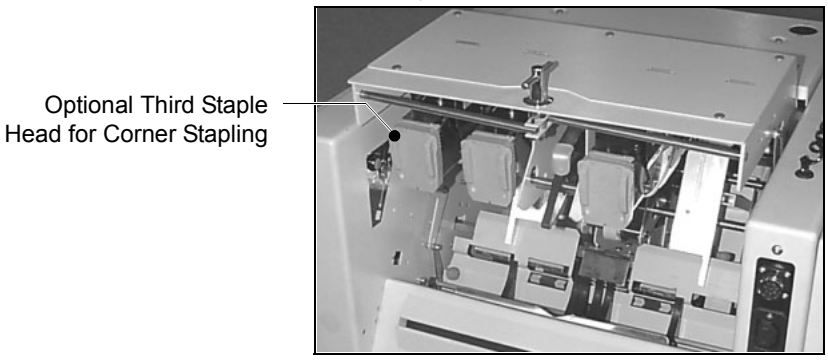
When edge or corner stapling, the staples will be inserted into the feed edge of the sheet.

Note: *The maximum sheet width that can be edge or corner stapled is 250mm, 9.8". If the sheet width exceeds this, the top jog is automatically switched off and may not give satisfactory results.*



Third Staple Head Kit

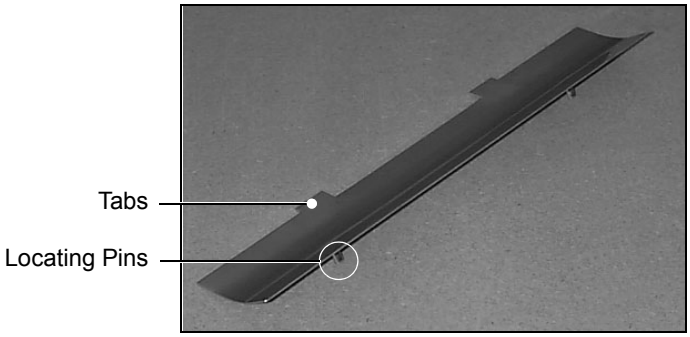
The booklet maker has two staple heads as standard. A third head can be specified as an option, to enable corner stapling.



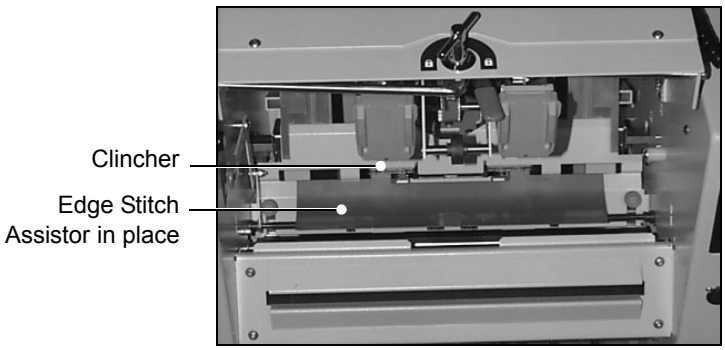
Edge Stitch Assistor

When edge or corner stapling only a few sheets, it is possible for the thin sets to jam in the booklet maker. In this case, the Edge Stitch Assistor should be fitted.

This is supplied as part of the optional third staple head kit, or can be ordered as an accessory.

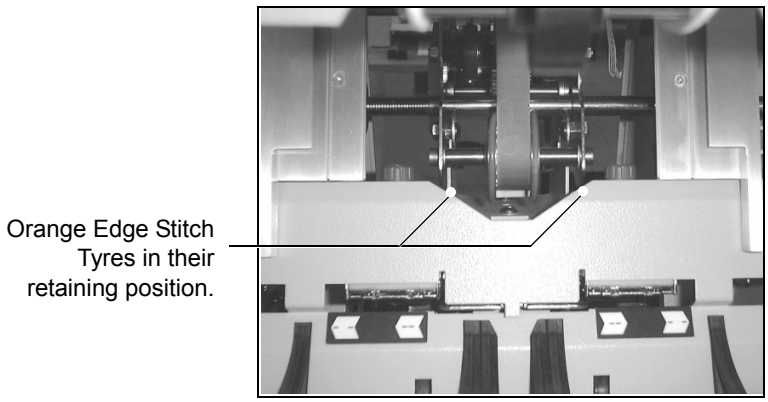


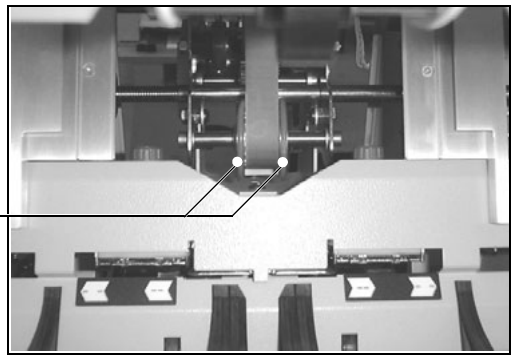
Fitting the edge stitch assistor. To fit the edge stitch assistor, open the booklet maker lid. Hold the assistor with the locating pins facing downwards, and slide the tabs under the staple clinchers. Make sure the assistor is positioned squarely and then press down until it clicks into place (see below).



Engage the Edge Stitch Drive

Open the staple panel. Unhook the orange edge stitch tyres from their retaining position, and place into the grooves on the top jog pulley control discs, on either side of the belt.





Close the staple panel and place the edge stitch selector lever to the edge stapling position.

Note. *When returning to booklet making, the orange edge stitching tyres* ***MUST*** *be removed from the belt control discs and returned to their retaining position. Leaving the tyres on the belt control discs during booklet making will result in jams in the booklet maker.*

Edge Stapling & Folding

If required, it is possible to edge staple the set and then fold it. The only limitation to this is that the distance from the stapled edge to the fold must be at least half the width of the paper.

- Set **STITCH POSITION** to **ON EDGE** from the **STITCH AND FOLD** window
- Lift the Edge/Centre Staple Selection Lever up to select centre stapling (NOT edge stapling)

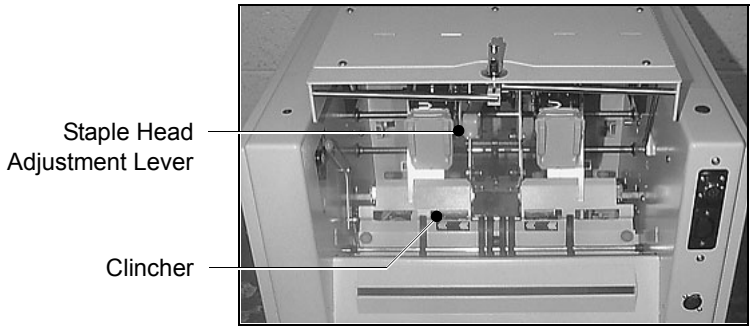
Select the Staple Heads

Use the Staple Head Selection Button to select which staple heads are active. For bookletmaking, the two centre staple heads should be used. Corner stapling is only possible if the optional third staple head is fitted. The staple head indicator lights show which heads are selected.

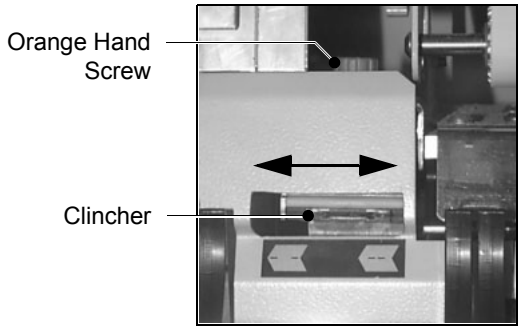
Staple Head Position

The staple heads have two positions. Normally the heads should be in the outer position (138mm, 5.4" between staple centres). For small booklets the inner position can be used (115mm, 4.5" between staple centres).

To adjust, move the staple head adjustment lever to the right to select the inner position.



Adjust the clinchers to suit by loosening the orange hand screw and sliding the clincher fully across in the required direction. Tighten the hand screw.



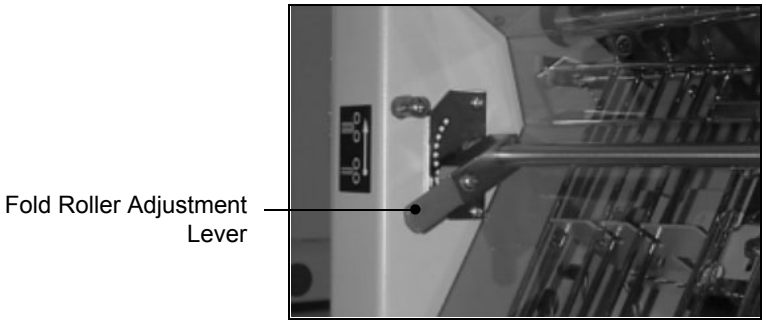
Note: *You may need to increase the infeed sidelay gap in order to access the hand screws. Do this by touching* **FINISHING**, **PAPER SIZE** *and then increasing the sheet width.*

Caution: *Before placing your hands inside the booklet maker, you should disconnect the unit from the mains electricity supply.*

Fold Roller Gap Adjustment

The fold rollers should be set sufficiently close together to produce a neat booklet. If the fold rollers are set too close together, the booklet covers may be pulled (resulting in damage around the staples) or the spine of the booklets may be scuffed.

The gap between the fold rollers is adjusted using a lever to the left of the front face of the booklet maker.

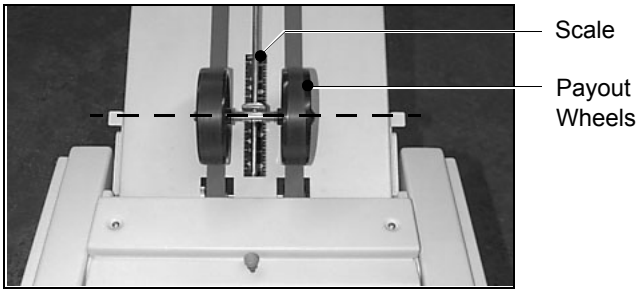


The lever has 11 positions. To move the fold rollers further apart (i.e. for larger sets or heavier stock) move the lever upwards. Move the lever down to bring the fold rollers closer together.

When edge stapling, the fold rollers should be fully open, i.e. the lever should be fully upwards.

Outfeed Conveyor Adjustment

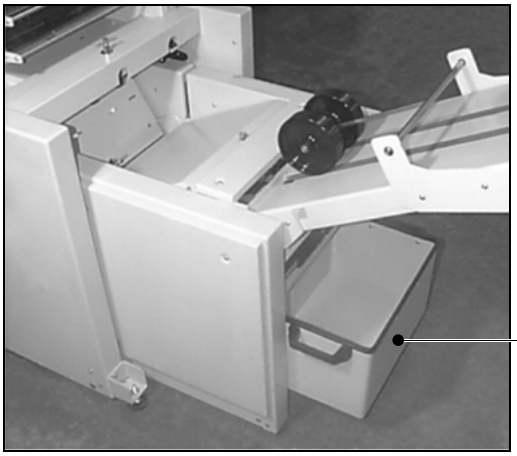
Slide the large payout wheels up or down their mounting rail so that they are just nipping the spine of the book when it is released from the rollers. Use the scale on the outfeed as a guide.



Tip: *Common sizes are highlighted on the scale. For example for an A5 (5½ x 8½") book, use the A5 marker.*

Trimmer Offcut Box

The trimmer offcuts are delivered into the trimmer offcut box. This box hooks onto the trimmer.



Remember to empty the trimmer offcut box periodically.

There is a sensor on the trimmer to detect when the offcut box is full. Once this sensor is activated, the booklet maker will beep after every second booklet produced.

Trim Margin

If you are inserting sheets from a Friction bin, which have been printed offset litho, we recommend that the job be printed with a 12mm trim margin on the feed edge and a smaller (perhaps 3-5mm) trim margin on the trailing edge. In this way any marking that could possibly occur due to wet ink or ink rub will always be in the trim margin.

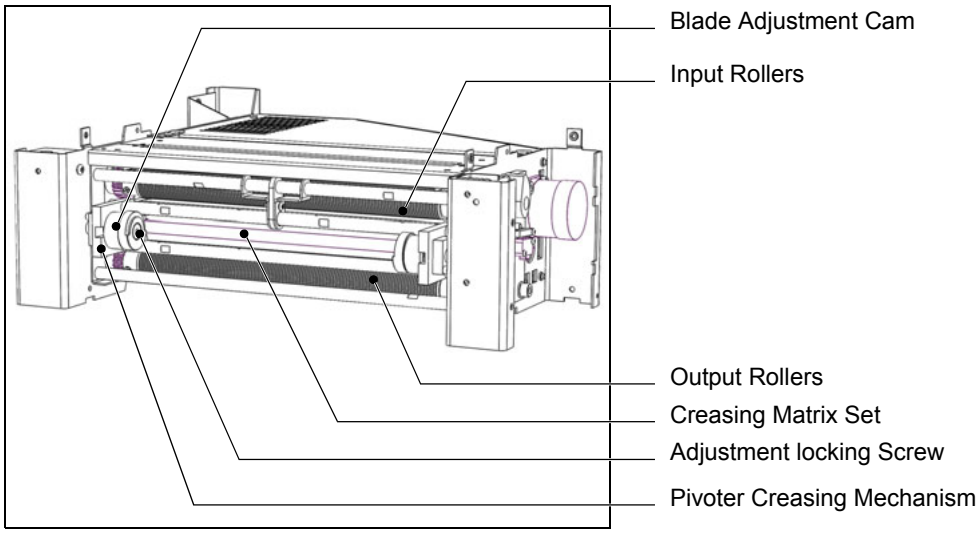
CHAPTER 4 Creaser Module

The DocuMaster MFC has a Creasing module fitted. This is designed to crease single sheets of any given set as they pass through it.

To enable creasing for a particular job, please see “Creasing Module” on page 46.

Creaser Overview

The creasing section is always located immediately below the lowest feeder bin and directly above the Gathering Base module.



The Creasing Module

Creasing Module

When the creasing module is installed, a creasing menu button is available on the 'Basic' Window. The 'mimic' shows the creasing module is installed.

The creasing module shown on the mimic

Creasing menu button

Creaser Button and Mimic

Crease Options

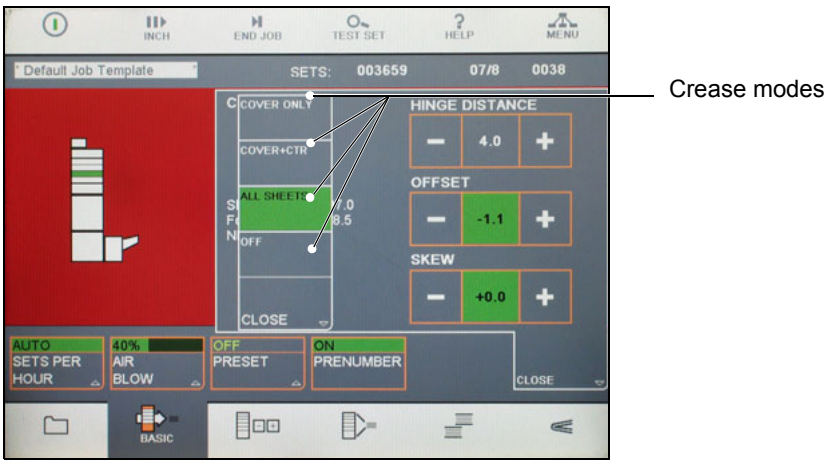
Pressing the 'Creaser' button on the 'basic' window displays the available settings.

Creaser Settings Window

Crease positions are calculated from the information entered in the 'Finishing' window. The crease positions are always positioned in the centre of the sheets, to be aligned with the fold position (except hinges).

Mode

There are 4 creasing modes that are selectable, depending on the type of job finish that is required.



Crease Mode Settings

Cover Only

The Cover Only mode is used to ensure it is ONLY the cover that is creased as it passes through the Creasing Module.

Cover + Centre

This mode will place a crease on the first sheet of a Set as well as the cover sheet. As this sheet ends up in the middle of the finished book, it is referred to as the 'Centre' sheet.

All Sheets

All sheets that pass through the creaser (one at a time) will be creased.

Off

All creasing is disabled.

Pressing the 'creaser' button brings up several other settings, these are additional functions that enable user adjustments to the pre-set crease type and positions.

Hinges

The cover sheet may require the use of hinge creases. Creases are designed to facilitate the opening of the book and relieve some of the stress from the staples of the finished booklet.

Hinges are selectable by turning them 'ON' or 'OFF', using the toggle button.

Hinge Distance will default to 6mm. This indicates that each of the 2 hinge creases will be positioned 6mm from the centre crease (fold position). The user is able to manually adjust the setting from 6mm up to a maximum of 12mm.

Offset

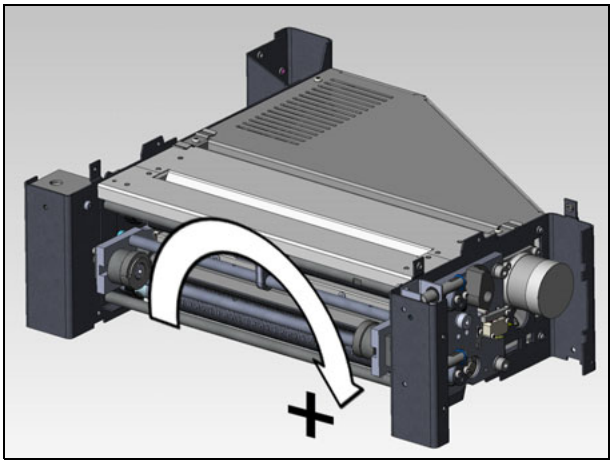
Use this setting to affect the position of the creases. It is possible to move the crease from the 'calculated' middle of a sheet by +/- 5mm.

Skew

One of the key features of the creasing module is the ability for the crease angle to be automatically adjusted as the sheets pass through.

The creaser can automatically detect the lead edge of the sheets and adjust itself to match each sheet. This means that even if the sheet is not placed into the feed bin perfectly squarely, as the sheet passes through the Creasing Module, it will self-adjust to align with the sheet each and every time.

Occasionally, it is possible that the sheets have been poorly cut and the lead edge of the sheet may not be parallel to the desired fold position. If this is the case, the Skew Offset setting is designed to overcome this and will alter the default position according to the diagram below.

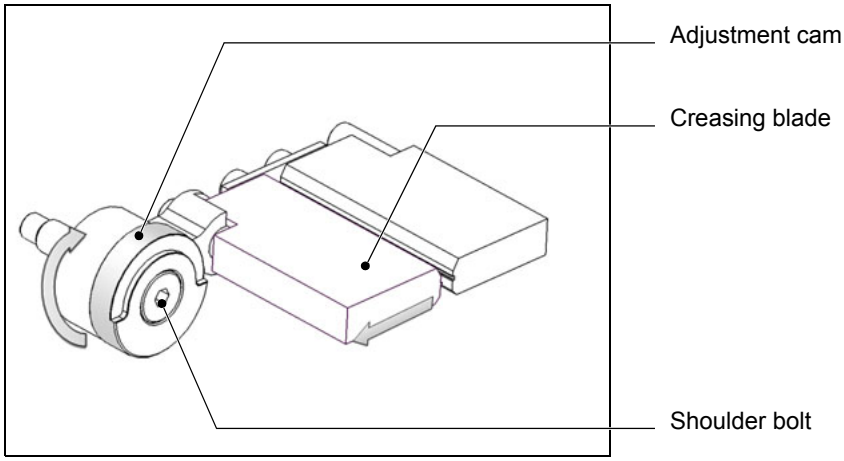


Skew Adjustment Orientation

Adjusting the Creasing Pressure

Some stocks require a more defined crease in order to prevent the substrate from cracking when folded. This is a mechanical adjustment and should be carried out once you have creased and checked a test sheet. There is an adjustment scale printed onto each adjuster cam, the thicker the scale the deeper the crease.

1. Ensure the machine is switched 'ON' and the Emergency Stop button has been turned clockwise to release the safety latch.
2. Move the creasing matrix to the 'Top Dead Centre' position by pressing the red 'emergency stop button and twisting it to release.
3. Lift and pull the the creaser cover to remove the creaser cover and give access to the creaser mechanism.
4. Using a 5mm Allen key, unlock the 2 shoulder bolts positioned at each end of the creasing blade. See the diagram below.
5. Rotate the 2 adjustment cams by the same amount to adjust the blade pressure. Increasing the gradient on the scale will increase the blade pressure.



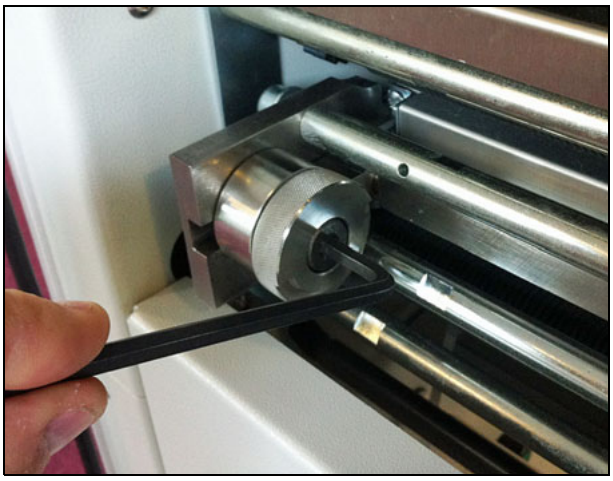
Blade pressure adjuster. Left hand end.

6. Ensure that both shoulder bolts are locked after making the setting.
7. Fit the creaser cover.

Reversing the Crease Matrix Set

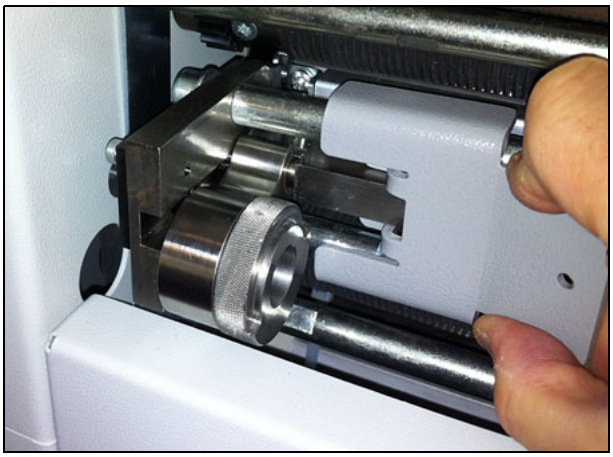
It is possible to change the creasing anvil and blade to reverse the crease profile. This is often used to change the look of the finished folded document and is selected by customer preference.

1. Ensure the machine is switched 'ON' and the Emergency Stop button has been turned clockwise to release the safety latch.
2. Move the creasing matrix to the 'Top Dead Centre' position by pressing the red 'emergency stop' button and twisting it to release.
3. Remove the creaser cover to provide access to the creaser mechanism.
4. Using a 5mm Allen key, loosen and remove the 2 shoulder bolts positioned at each end of the creasing matrix set.



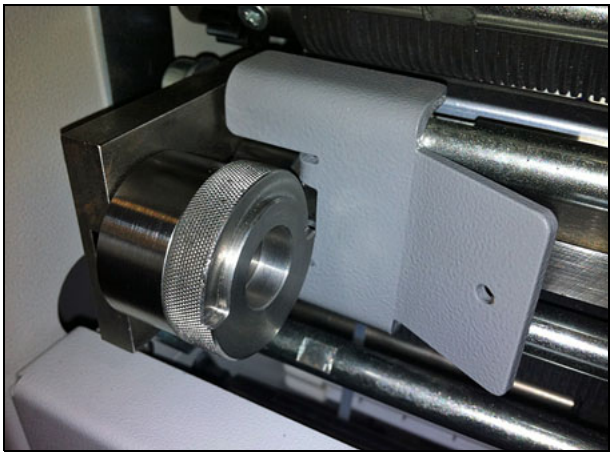
Remove the shoulder bolts

5. Locate the removal tool over the tie bars.



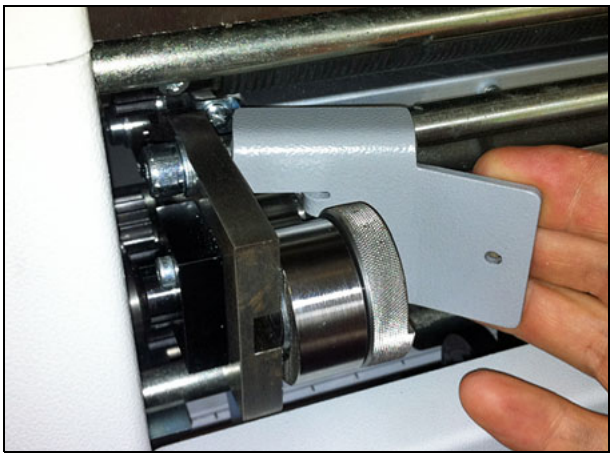
Fit the removal tool

6. Ensure the adjuster assembly is positioned horizontally, so that the 2 tangs are able to locate fully into the adjuster as shown below.



Correct position of the removal tool

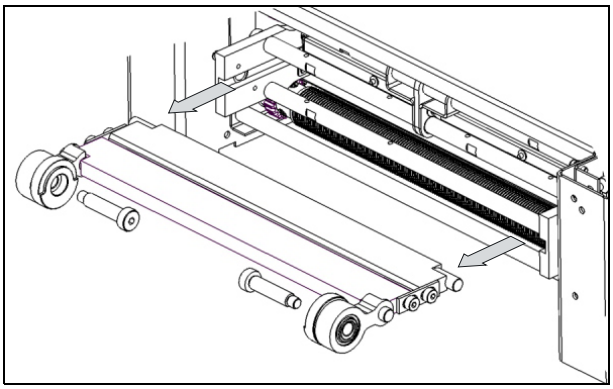
7. The creasing matrix set can then be unclipped from the machine by pulling the tool towards you.



Pull the removal tool toward you

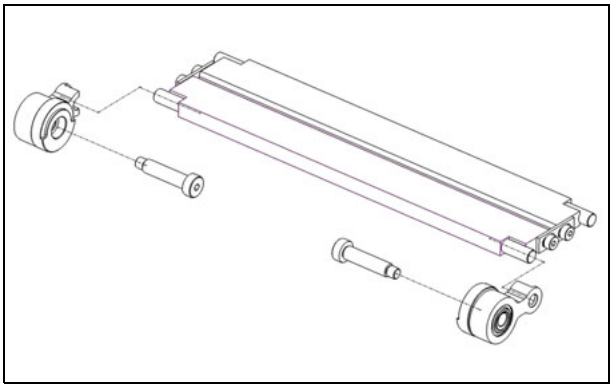
8. Repeat on the opposite side to release both adjusters.

9. Slide the creasing matrix horizontally out from the machine. See below. Put the creasing matrix on a flat surface.



Slide the creasing matrix from the machine.

10. Remove the blade-adjustment cam-assemblies from the dowels located in the ends of the blades or anvils.



Remove the blade adjustment cams.

11. To re-install the creasing matrix, fit the adjustment cams to each end of the creasing blade or the anvil (depending on the application).
12. Slide the creasing matrix into the slots of the creasing unit.

Fit the creasing matrix

13. Push firmly into the unit until the matrix clips into the mechanism with a positive 'click'.
14. Re-install the 2 locking shoulder bolts positioned at each end of the creasing blade. Ensure the pressure is set loosely (the narrow end of the scale) before finally tightening the shoulder bolts.
15. Fit the creaser cover.
16. Proceed to adjust the creasing pressure.

CHAPTER 5 Maintenance

Service Interval

It is recommended that your DocuMaster MFC is serviced by an approved service engineer every 1,000 operating hours. Please contact your supplier.

This chapter covers all routine adjustment and maintenance procedures that can be carried out by an operator. Some of these procedures require a degree of technical competence, and you may prefer for these to be undertaken by your service engineer.

Operator Maintenance

As with all machinery, your DocuMaster MFC will benefit from periodic cleaning of general accumulations of paper dust, ink etc.

Cleaning Materials

The DocuMaster MFC should only be cleaned with a cloth moistened with soap and water or with alcohol (isopropanol).

Important. Do *not* use any of the following chemicals to clean the separators, feed wheels or conveyor wheels:

- × Cleaners based on esters and ketones, e.g ethyl or butyl acetate esters or methyl ketone (MEK).
- × Aliphatic solvents, e.g. petrol or SBP1.
- × Aromatic solvents/cleaners, e.g. toluene xylene, napthas.
- × Chlorinated solvents/cleaners, e.g. trichloroethylene, perchloroethylene genclenes.

All of these chemicals will *damage* the separators, feed wheels and conveyor wheels to a varying degree resulting in poor performance and premature failure.

Touch Screen

The touch screen should only be cleaned with a clean, dry cloth. Abrasive materials and chemicals should never be used to clean the screen.

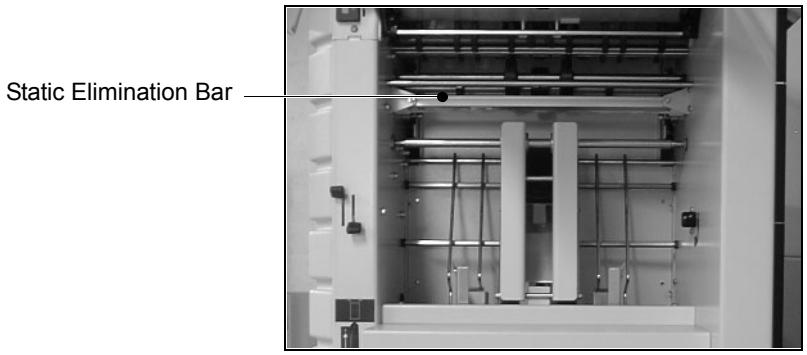
Light pressure with a suitable cloth should be sufficient to remove fingerprints. Do not use excessive force.

Static Elimination Bar

The static elimination bar is located in the gathering station.

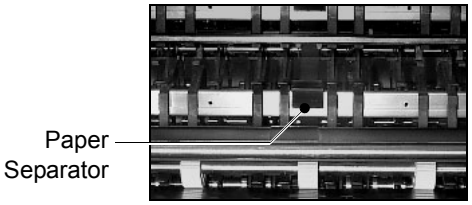
Caution: *Disconnect the machine from the mains electricity supply before cleaning the static elimination bar.*

The pin side of the bar should be cleaned regularly using a small brush such as a toothbrush. This is vital to the effectiveness and life expectancy of the static elimination equipment.



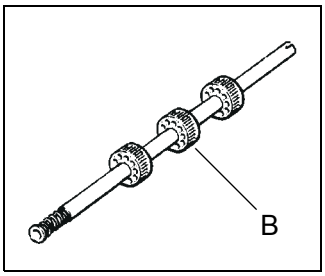
Friction Feed Bins

Paper Separators. There is one paper separator located in the centre of each friction feed bin. It slots into the aluminium pick-up manifold immediately beneath the central feed wheel. They should be cleaned if dirty and replaced when worn. The replacement interval will depend upon the usage level and the type of papers used.



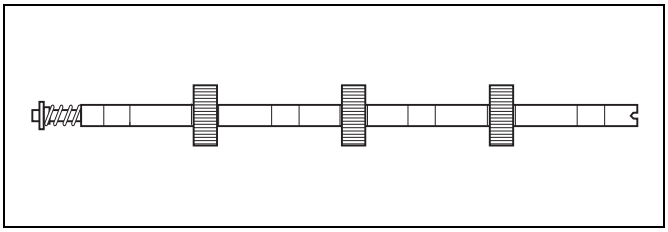
- Remove the feed wheel shaft by pushing it to the left against the spring pressure and lifting the right end clear
- Locate the separator and lift it out vertically
- Clean or replace the separator as required. When cleaning the separator use only soap and water or alcohol (isopropanol). Refit the separator and ensure that it seats firmly in the correct position
- Refit the feed wheel shaft

Feed Wheels.



The friction feed bins are fitted with three feed wheels (B) mounted on a shaft. They should be cleaned if dirty and replaced when worn. The replacement interval will depend upon the usage level and the type of papers used.

- Remove the feed wheel shaft by pushing it to the left against the spring pressure and lifting the right end clear. Clean the wheels using only soap and water or alcohol (isopropanol)
- If the wheels need to be replaced, grasp the shaft firmly and slide off each wheel (this will be eased by wetting the shaft slightly)
- Ensure the shaft is clean, and slide on each new wheel, ensuring that the wheels align with the correct marks on the shaft. The standard position for the wheels is shown below



- Replace the shaft
- Select **CLEANING** in the **MENU, USER SETTINGS** window and press the red button on the bin controls to turn the feed wheel shaft. Visually check that each wheel runs true. To straighten a wheel, gently hold a flat edge against the wheel whilst it turns

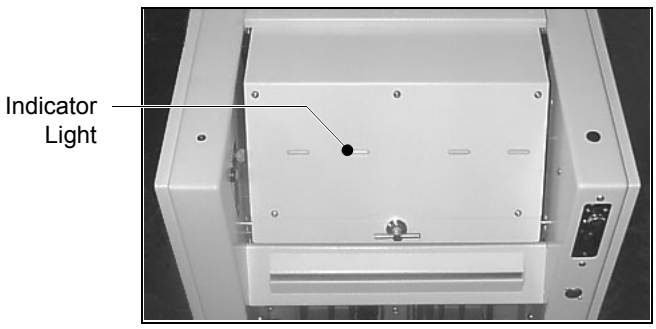
Booklet Maker and Trimmer

Changing the Staple Cartridge

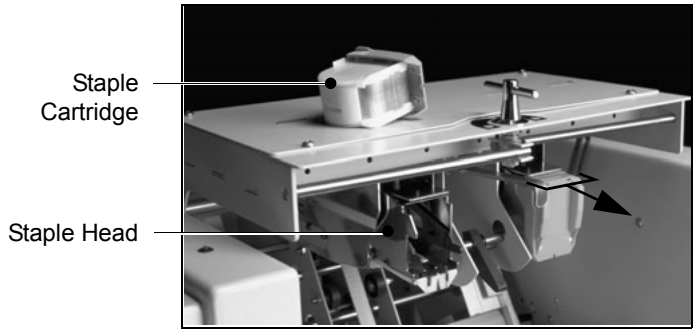
When a staple cartridge runs out, the corresponding red indicator light will blink once per second. The message **STAPLES LOW** will also be shown on the DocuMaster MFC control panel.

New cartridges are available from your supplier (P/N 810-022).

To change a cartridge, first open the booklet maker lid by turning the handle to the left and lifting. The lid is supported by a strut on the right side.



Grasp the cartridge at the top and pull directly away from the staple head, as shown by the arrow in the photo.



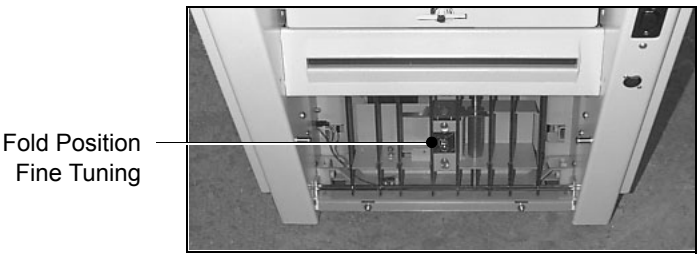
Fit the new cartridge and check machine operation by making a few test booklets.

Staple Position Adjustment

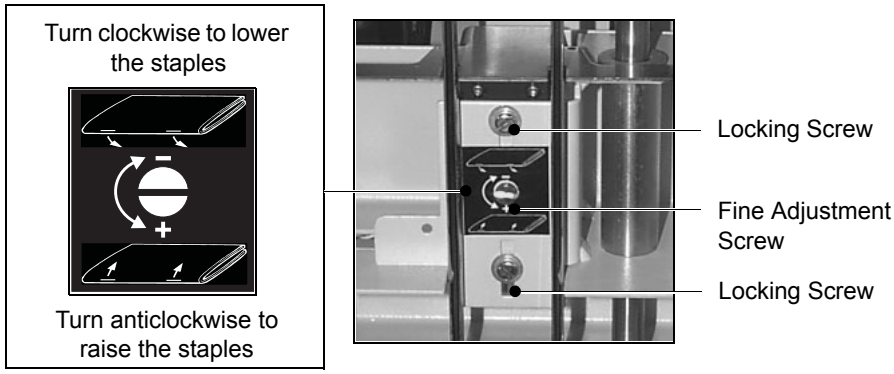
If both staples are consistently off the spine of the book, first ensure that the booklet maker is adjusted correctly and that delivery into the unit is good. If the problem persists, fine tuning of the staple position may be necessary.

Tools Required. Flat Blade Screwdriver.

Adjustment is via the central screw on the fold plate mechanism, located behind the perspex cover.



In the **FINISHING** window, set **PRESETS** to A3 or 11x17" (regardless of booklet size). The screws will now align with the holes in the perspex cover. Using a flat blade screwdriver, loosen the two locking screws .



Turn the fine adjustment screw clockwise to lower the position of the staples (as viewed when the book exits the unit) and anticlockwise to raise the staples. One quarter turn of the screw equates to approximately 2mm of travel.

Tighten the locking screws and produce a test booklet. Repeat the procedure if necessary.

Conveyor Clamp Adjustment

The trimmer conveyor clamps are set to a default position at the factory, which gives a good trim over a wide variety of booklet thicknesses.

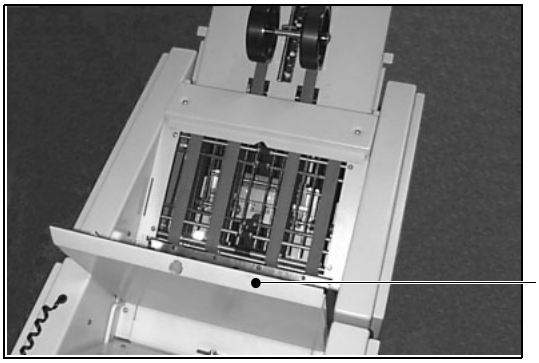
However, when trimming unusually thick or thin booklets, the conveyor clamps may need to be adjusted. This will be necessary if the following problems arise:

- Booklets are trimmed out of square
- Booklets are trimmed too short
- The cover of the booklets are pulled, resulting in damage around the staples

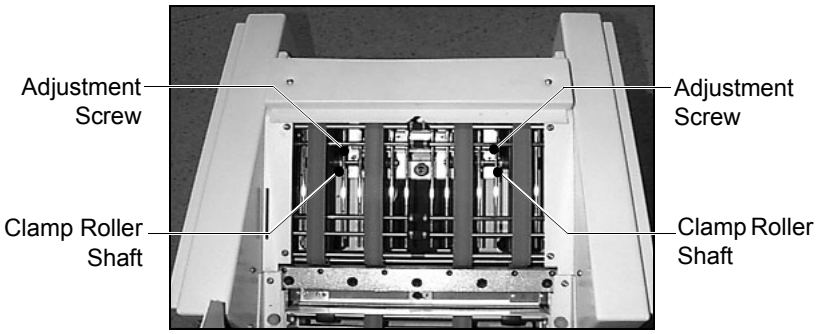
Tools Required. 4mm Allen Key, 2 off 150mm/6" Rule.

Select A4 or 8.5x11" in the **FINISHING**, **PAPER SIZE** window (regardless of the booklet size). Once the booklet maker beeps to confirm it is ready, disconnect it from the mains electricity supply.

Open the trimmer lid by lifting the orange hand screw.



There are two clamp roller shafts, which are adjusted using a 4mm allen key.



Adjusting the Conveyor Clamps.

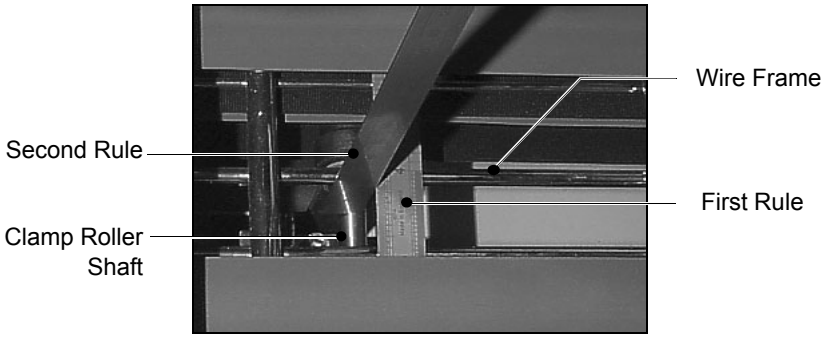
- Turn the adjustment screws clockwise to increase the gap (reducing clamp pressure)
- Turn the adjustment screws anti-clockwise to reduce the gap (increasing clamp pressure)

Checking the Adjustments. It is important that both clamp roller shafts are adjusted to the same height. The factory default is 17mm between the top of each shaft and the top of the wire frame.

Lay the first rule across the wire frame, so that it is above the clamp roller shaft.

Using the second rule, measure the height from the top of the shaft to the bottom of the first rule.

Adjust the shafts as necessary and re-measure to ensure they are both set to the same height.



Restarting the Job. Before restarting the job, reset the paper size as necessary.

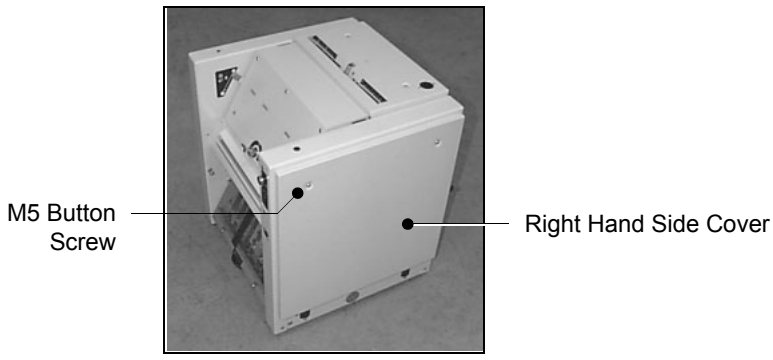
Note: *It is important to return both clamp roller shafts to the factory default height of 17mm before booklets of a more typical thickness are produced.*

Fold Roller and Conveyors

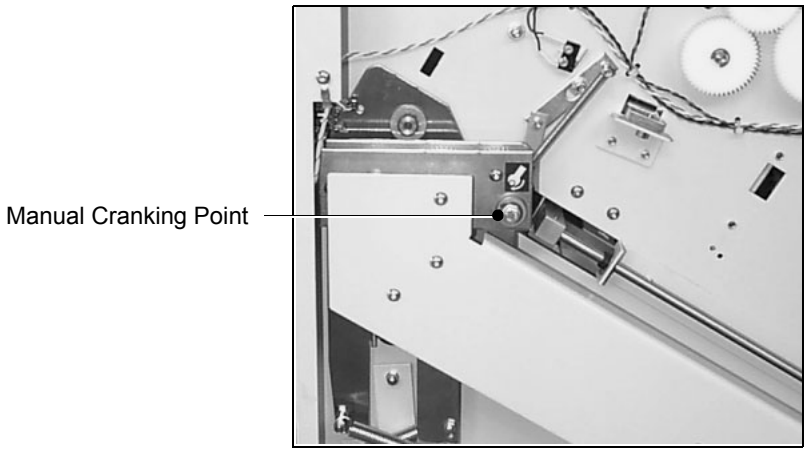
Build up of dust or dirt on the fold rollers and conveyor belts will eventually cause slippage or ink transfer. They should therefore be cleaned periodically.

Warning: *Access to the manual cranking points on the booklet maker and trimmer requires the side covers to be removed. For safety reasons this procedure should therefore only be conducted by authorised personnel. Disconnect the power before removing the side covers. At all times keep your hands away from the blade area of the trimmer.*

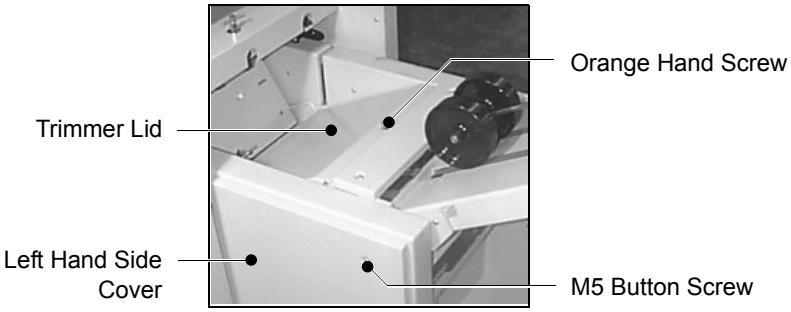
Booklet Maker. To clean the rollers and belts on the booklet maker, first remove the right hand side cover (two x M5 button screws) to give access to the manual cranking point.



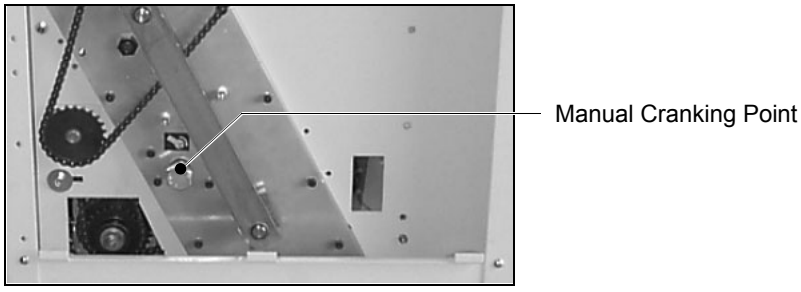
Open the booklet maker lid to access the fold rollers. Using a 10mm A/F spanner (wrench), manually crank the booklet maker by turning the nut clockwise, and clean the rollers and belts with a cloth dampened with soap and water or alcohol (isopropanol). Do NOT use blanket wash or other chemicals.



Trimmer. To clean the belts on the trimmer, first remove the left hand side cover (two x M5 button screws) to give access to the manual cranking point.



Open the trimmer lid, and using a 19mm A/F spanner (wrench), manually crank the trimmer by turning the nut clockwise, whilst cleaning the belts with a cloth dampened with soap and water or alcohol (isopropanol). Do NOT use blanket wash. or any other chemicals.



Sharpening the Trimmer blade

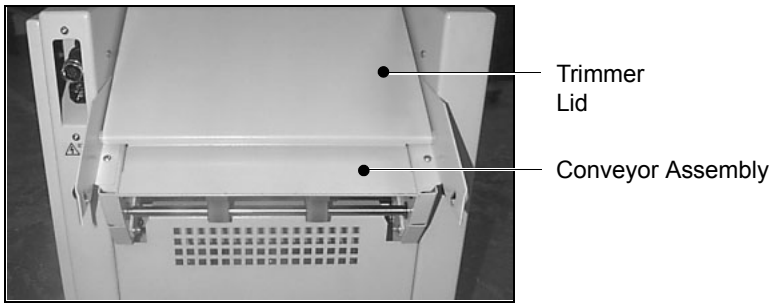
Periodically all trimmer blades will require re-grinding. Poor grinding will result in poor life, cracks and nicks in the blade. We therefore offer the guidelines on p.68 which should accompany the blade and anvil when they are sent for re-grinding. Your service engineer will arrange regrinding for you if required.

Whenever the trimmer blade is re-ground, check the condition of the anvil also. This will only require re-grinding if it has become damaged.

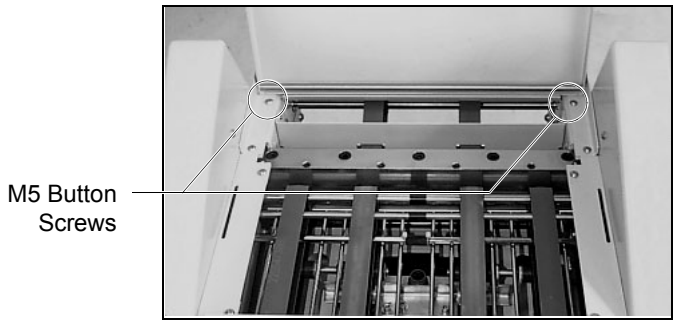
Warning: *This procedure is potentially hazardous and should only be conducted by suitably skilled personnel. Disconnect the power before removing the conveyor assembly. Handle the blade with extreme caution and keep hands clear of cutting edges at all times.*

Tools Required. 3mm Allen Key, 4mm Allen Key, 6mm Allen Key, 10mm Allen Key, 19mm Spanner.

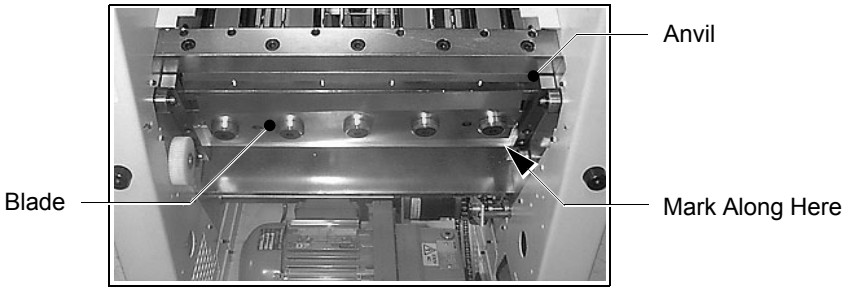
The trimmer blade and anvil are located behind the conveyor assembly at the docking end of the unit.



Separate the trimmer from the booklet maker. Open the trimmer lid. Remove the two M5 button screws and washers that secure the conveyor assembly to the trimmer unit.

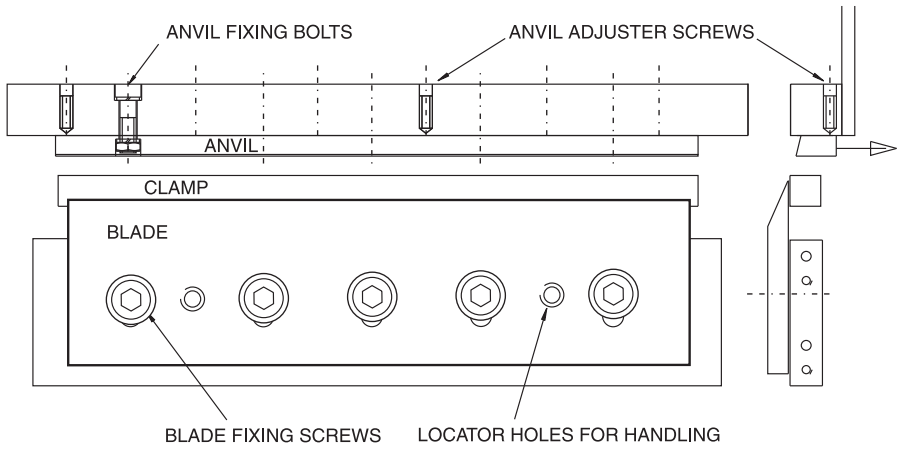


Lift away the conveyor assembly to reveal the blade assembly.



Important: *Note the angled position of the trimmer blade and with a marker pen or similar, mark along the bottom edge of the blade. This will act as a guide when refitting*

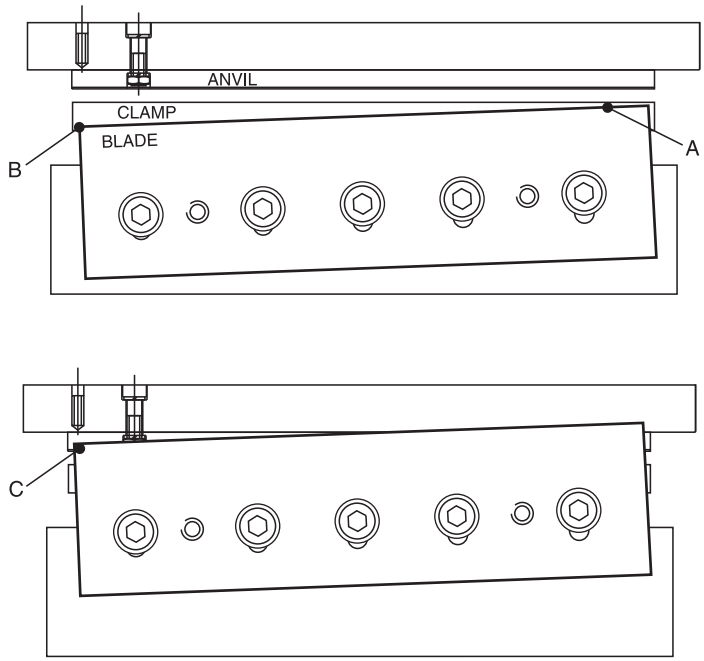
Removing the Trimmer Blade. Slightly loosen all five blade fixing screws. Remove the outer two screws and screw them into the locator holes. These will now act as handles. Remove the remaining screws and carefully lift the blade away. Immediately put the blade away safely.



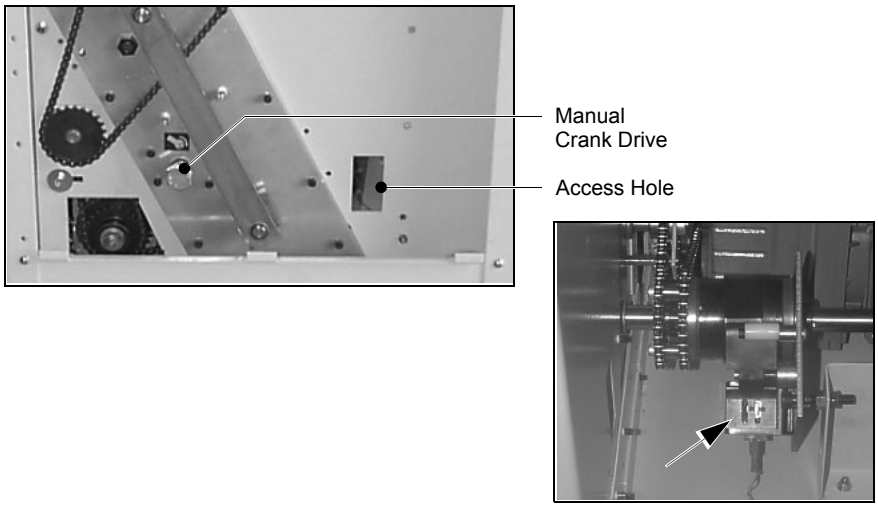
Check the Anvil. Carefully check the anvil for any damage. If it requires re-grinding, remove the five fixing screws and lift away.

Refitting the Blade and Anvil. Slacken the anvil adjuster screws back two revolutions. Position the anvil fully back towards the conveyor and lightly tighten the anvil fixing screws. Affix the blade using the five blade fixing screws but do not tighten. Using the mark made when the blade was removed, adjust the angle of the blade. Ensure that it does not protrude above the clamp at point ‘A’

or below it at point ‘B’. Lightly tighten the centre screw, sufficient to hold the blade in this position.



Remove the left hand trimmer side cover (two x M5 button screws and washers). Release the clutch by depressing the lever (see below) through the access hole in the side plate.



Use a 19mm spanner to manually crank the unit until the blade is at top dead centre. At point ‘C’ the blade must pass the anvil by 1mm (1/25"). Make fine adjustments to the position if necessary. Tighten all the blade fixing screws starting from the centre and working out. Push the anvil firmly forwards against the blade (pushing from behind with your fingers at each end). Maintain a light pressure on the back of the anvil whilst tightening the anvil fixing bolts starting

from the centre and working out. Lightly tension the anvil adjuster screws against the anvil.

Final Adjustment. Release the clutch and manually crank slowly several rotations. Check that the blade passes the anvil smoothly without obstruction.

Place a single sheet of paper (large sheet size) between the blade and the anvil and manually crank to produce a test cut.

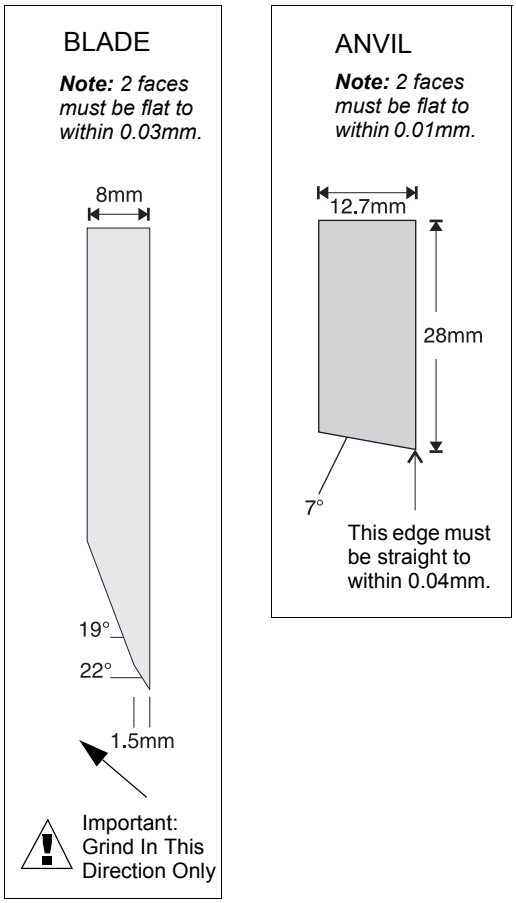
Warning: *Ensure that hands are kept clear at all times*

Check that a clean cut is obtained across the full width of the blade. If necessary loosen the anvil fixing screws at the point where adjustment is needed, apply additional pressure to the anvil adjusting screws (1/6th turn at a time) and re-tighten the anvil fixing screws.

Perform another test cut and make further adjustments if necessary.

Hook the conveyor assembly onto the support posts and push into position. Secure with two M5 button screws and washers. Fit the side cover and secure.

Trimmer Blade Grinding Specification



Blade Material	High Carbon High Chrome (Aisi D2/ D3)
Grinding Angle	See drawing alongside
Grinding Wheel	Cup or Cylinder
Grinding Material	Grit : 46-60 Hardness : G-H Bond : Vitrified
Peripheral Speed of the Grinding Wheel	20-26 (V M/S) 65-85 (V Ft/S)
Table Speed	20-26 (V M/Min) 65-85 (V Ft/Min)
Feed Per Pass	0.01 - 0.02mm 0.0004 - 0.0008"

Honing

After re-grinding, the burr should be carefully removed by honing. The quality of honing affects the useful life of the cutting edge.

CHAPTER 6 Problem Solving

This chapter explains how to resolve any problems that may occur with your DocuMaster MFC System. If a problem persists, please contact your supplier.

Trouble Shooting Chart

As far as possible the DocuMaster MFC has been designed to be self-explanatory. In most cases problems or errors will be identified on the control panel. This trouble shooting chart provides a further guideline to help solve any problems.

General Problems

Problem	Cause	Solution
THE MACHINE WILL NOT POWER UP	The machine is not plugged in	Plug in and switch on
	Faulty fuse	Check the fuse at the mains input and replace if necessary (see p.80)
THE MACHINE WILL NOT START	Several possible causes, exact cause will be shown on the display	Correct any faults shown on the display

Gathering Station Problems

Problem	Cause	Solution
SHEETS NOT IN CORRECT ORDER/NOT STACKING WELL	The unit has not been set to the correct paper size	Set the levers on the front of the unit to the correct paper size (see p.34)
	Sheets are falling forwards in the gathering station	Adjust the air blow (see p.35)
POOR FEEDING INTO BOOKLET MAKER	The static elimination bar is dirty, reducing effectiveness and causing the back sheet(s) of the book to cling to the gathering station as they are released	Clean the static elimination bars (see p.56)

Booklet Maker and Trimmer Problems

Problem	Cause	Solution
If you suspect the booklet maker adjustment system is not calibrated correctly, touch **RE-REF** in the **PAPER SIZE** window to manually recalibrate the booklet maker adjustment axes. After recalibration, the booklet maker adjustment axes will return to the current settings. If the DocuMaster MFC's software detects a possible axis positional fault, the unit will automatically recalibrate the axes.		
Operational Problems		
BOOKLET MAKER WILL NOT START	The booklet maker is not plugged in	Plug into mains connection of the correct type and voltage
	Interface between booklet maker and tower is not plugged in	Plug in
	Fuse has blown on the main input	On 220-240V machines there are two 5 amp fuses in the mains input connector, check and replace as necessary. On 115V machines they are 10 amp fuses.
	Booklet maker or trimmer lid is open	Close the lid
BOOKLET MAKER STATUS INDICATOR LIGHT IS BLINKING RAPIDLY	There is a jam or other error in the unit	Clear the jam (see p.75)
BOOKLET MAKER STATUS INDICATOR LIGHT IS NOT ILLUMINATED	Booklet maker or trimmer lid is open or unit is not switched on	Close the lid/switch on the unit
BOOKLET MAKER DOES NOT STOP ON TOUCHING ⊙ (Note: There is a 10s delay after touching ⊙. For an immediate stop, use the DocuMaster MFC emergency stop button or open the booklet maker lid)	Booklet maker has lost communication with the tower	Check that the interface is plugged in - it may have become disconnected when moving the booklet maker in and out
ONE OR BOTH STAPLE HEADS ARE NOT ACTIVATED	Staple heads are not selected	Make sure **STITCH** is set to **ON** in the **STITCH AND FOLD** window (see p.18)

Problem	Cause	Solution
	A staple head error has occurred	The heads should self clear. If not, turn the unit off and on again to free the head. If this does not work contact your authorised distributor.
STAPLES LOW MESSAGE ON DISPLAY	Staple cartridge empty	Replace cartridge (see p.58)
STAPLE HEAD ERROR MESSAGE ON DISPLAY	A staple head error has occurred	The heads should self clear. If not, turn the unit off and on again to free the head. If this does not work contact your authorised distributor.
FOLD IS NOT ACTIVATED	Unit is in edge staple mode	Move lever into centre staple position (see p.39)
BOOK IS NOT TRIMMED	Trim not selected	Make sure **TRIM** is switched on (see p.19)
	Trim position is set off the edge of the sheet	Reset trim position
	Edge stapling is selected or **STITCH POSITION** is set to **ON EDGE**	Not available in these modes
EDGE STAPLE FUNCTION NOT WORKING	Edge staple not selected	Move lever to correct position and select staple head (see p.39)
STAPLE IS NOT ON THE FOLD	Set is bouncing before stapling	Allow the set more time to settle by increasing **STITCH DELAY**
	Set is bouncing before folding	Allow the set more time to settle by increasing **FOLD DELAY**
	Loose paper or staples in the fold plate area	Locate and remove (see p.75)
	SIDE JOG HOLD is selected whilst the infeed sidelays are set too tight	Adjust **PAPER SIZE** so that both the infeed sidelays barely touch the paper (see p.18)
	STITCH POSITION is set to **ON EDGE**	Set **STITCH POSITION** to **ON FOLD**

Problem	Cause	Solution
	Staple position is not adjusted correctly	Fine tune the position of the staples (see p.59)
UNTIDY BOOKLET	Infeed sidelays are not adjusted correctly	Adjust **PAPER SIZE** (see p.18)
	Set needs more time to settle before stapling	Allow more time for the set to settle by increasing **STITCH DELAY**
	Tower delivering an untidy set	Improve tower delivery
	The booklet maker adjustment system is not calibrated correctly	Touch **RE-REF** in the **PAPER SIZE** window to manually recalibrate the booklet maker adjustment axes
FINISHED BOOKLET IS TOO LOOSE	Fold roller gap is too wide	Adjust the fold roller gap (see p.42)
TOP JOG DAMAGE ON THE SET	The sheet length has been set too short	Adjust **PAPER SIZE** (see p.18)
	Fold roller gap is too narrow (when edge stitching)	Adjust the fold roller gap (see p.42)
	Tower delivering an untidy set	Improve tower delivery
BOOKLETS WILL NOT STACK ON THE CONVEYOR	Large payout wheels incorrectly positioned	Reposition (see p.43)
	Electrical connection is unplugged	Plug in electrical connection between the booklet maker/trimmer and the outfeed conveyor
BOOKLET COVER IS MARKED	Dirty fold rollers	Clean them with a cloth dampened with soapy water or alcohol (isopropanol). Do NOT use blanket wash (see p.62)
	Fold roller gap is too narrow	Adjust the fold roller gap (see p.42)
CANNOT CLOSE BOOKLET MAKER LID	Support strut is in place	Lift the booklet maker lid slightly, push the support strut (see p.36) and close the lid

Problem	Cause	Solution
BOOKLET IS TRIMMED OUT OF SQUARE	Trimmer conveyor clamp requires adjustment	See p.60
BOOKLETS ARE TRIMMED TOO SHORT	Trimmer conveyor clamp requires adjustment	See p.60
COVER IS DAMAGED AROUND STAPLES	Trimmer conveyor clamp requires adjustment	See p.60
	Fold roller gap is too narrow	Adjust the fold roller gap (see p.42)
Staple Head Problems		
ONE OR BOTH LEGS TURN OUT	Incorrect clincher alignment	Re-align (see p.41)
STAPLE COMES OUT IN PIECES	Staple jammed in the cartridge	Inspect cartridge (see p.58) and remove any jammed staple wire
	A staple head error has occurred	The heads should self clear. If not, turn the unit off and on again to free the head. If this does not work contact your authorised distributor.
STAPLE HEAD INDICATOR LIGHT BLINKS ONCE PER SECOND	Staple cartridge empty	Replace cartridge (see p.58)
STAPLE HEAD INDICATOR LIGHT BLINKS RAPIDLY	A staple head error has occurred	The heads should self clear. If not, turn the unit off and on again to free the head. If this does not work contact your authorised distributor.

Problem	Cause	Solution
Paper Jam Problems		
PAPER IS JAMMED IN THE BOOKLET MAKER Open the booklet maker lid (this will disconnect the power for safety) and remove any jammed sets. Check carefully and correct any faulty adjustments that caused the jam to occur.	Paper is badly curled	Paper curl can normally be avoided by observing correct paper handling and storage procedures
	Staples are stuck in the clinchers	If there are staples stuck in the clinchers, remove with a pair of pliers
	Edge stitch drive is engaged when booklet making	Disengage the edge stitch drive (see p.40)
	Infeed sidelays are not adjusted correctly	Adjust **PAPER SIZE** so that both the infeed sidelays barely touch the paper (see p.18)
	Fold roller gap is too wide	Adjust the fold roller gap - a small gap gives more drive to pull the booklet through (see p.42)
PAPER IS JAMMED IN THE TRIMMER	Paper offcuts are obscuring the sensor in the conveyor	Open the metal conveyor cover and remove any trim offcuts **Warning:** *Disconnect the machine from the mains electricity supply before working near the blade area.*

Friction Feed Problems

Problem	Cause	Solution
DOUBLE FEEDS	Too much tray pressure	Reduce by moving handle in by one notch at a time (see p.26)
	Too little separation pressure	Increase by moving the lever down by one notch at a time (see p.26)
	Insufficient air separation	Increase the value of **AIR BLOW** in the **BASIC** window
	Worn or missing separators	Check separators are present, and replace if worn (see p.57)
	Bad guillotine burr, or blunt drilling	Fan the stock by hand before loading, ensure paper is cut well next time
	Miscalibration during the test set	Run another test set by touching ⊙, followed by **TEST SET** followed by ⊙
MISS FEEDS	Too little tray pressure	Increase by pulling the handle out by one notch at a time (see p.26)
	Too much separation pressure	Reduce by moving the lever up by one notch at a time (see p.26)
	Untidy loading	Reload the bins tidily, ensuring the paper stack is underneath the feed wheels and under the guides
	Worn feed wheels	Check and replace the feed wheels if necessary (see p.57)
	Miscalibration during the test set	Run another test set by touching ⊙, followed by **TEST SET** followed by ⊙. It may be necessary to increase the tray pressure to obtain a better feed

Problem	Cause	Solution
TRAILING FEED (On a trailing sheet the machine stops immediately. You need to look carefully to identify which of the following is the cause. The faulty set can be inched through by touching and holding **INCH**)	Late feeding double sheet	Treat as double feed above
	Slow feeding sheet	Treat as miss feed above
	Slow feeding during test set causing incorrect calibration	Run another test set by touching ⊙, followed by **TEST SET** followed by ⊙. It may be necessary to increase the tray pressure to obtain a better feed
PAPER JAM	Sheet is jammed in the paper path	Locate the sheet and either pull it out or **INCH** it through
	Sheet is only half feeding	Treat as miss feed above
	Feeding A5 (5½ x 8½") landscape without selecting **SHORT** in the **ADVANCED: FEED CLUTCH** window	Select **SHORT** in the **ADVANCED: FEED CLUTCH** window and run another test set by touching ⊙, followed by **TEST SET** followed by ⊙.
FRONT EDGE OF SHEET DAMAGED	Too much separation pressure	Reduce by moving the lever up by one notch at a time (see p.25)

SlimVAC Feed Problems

Problem	Cause	Action
DOUBLE FEEDS	The tray is too high	Lower the tray height (see p.31)
	Not enough corrugation on suction feeder	Increase sheet corrugation (see p.30)
	Mechanical paper problem - guillotine burr, sticky ink, poor perforations, high static charge etc.	Fan stock by hand before loading, and ensure these problems are avoided in future
	Rubber endlay is incorrect type or position	Use correct type and positioning (see p.29)
MISS FEEDS	Not enough air separation	Increase the value of **AIR BLOW** in the **BASIC** window
	Too much sheet corrugation	Reduce the sheet corrugation (see p.30)
	The tray is too low	Raise the tray height (see p.31)
	Heavy and/or rigid sheets	Raise the angle of the suction feeder (see p.31)
	Paper has curly edge	Refer to recommended settings (see p.32)
	Rubber endlay is too tight against the paper stack, or is incorrect type	Position the endlay approx. 1mm (1/16”) clear of the edge of the stack. Ensure it is the correct type for the paper size (see p.29)
TRAILING FEED (On a trailing sheet the machine stops immediately. You need to look carefully to identify which of the following is the cause. The faulty set can be inched through by touching and holding **INCH**)	Trailing double feed	Treat as a double feed
	Trailing single feed	Treat as a miss feed
TOP AND/OR BOTTOM BIN ONLY FEEDS ON TEST SET	Batch insert selected from batch menu	Check that **INSERTS** in the **BATCH** window are set as required.

Problem	Cause	Action
DOUBLE FEEDS ARE NOT BEING DETECTED	The bin sensor is 'over-range' due to the feeding of particularly heavy or opaque stock. The red light on the bin controls will flash slowly when the sensor is overrange	N/A
	Detector Position tolerance is set to x2 Coarse	Set **TOLERANCE** to **x1 NORMAL** in the **ADVANCED**, **DETECTOR POSITION** window
	Double Detection is not selected	Set **DOUBLE DETECTION** to **ON** in the **ADVANCED**, **DETECTOR POSITION** window
PAPER JAM	Sheet is pre-feeding	Treat as a double feed
	Sheet is miss feeding	Treat as a miss feed
FRONT EDGE OF SHEET DAMAGED	Too much sheet corrugation	Reduce the sheet corrugation (see p.30)

Paper Jams

Paper Jams in the Booklet Maker and Trimmer

Paper jams are most commonly caused by:

- incorrect settings of **PAPER SIZE**
- by paper jammed in the trimmer infeed
- an over-full trimmer offcut box
- the use of curly paper
- using **PRE-JOG** with large sheet sizes

Open the safety covers of the booklet maker (this will disconnect the power for safety) and remove any jammed sets.

Sets jammed in the trimmer can be removed from either the infeed or outfeed of the unit or by removing the trimmer offcut box. Check carefully and correct any faulty adjustments that caused the jam to occur.

Paper Offcuts Obscuring the Sensor. Paper jams can also be caused by offcuts obscuring the sensor in the trimmer conveyor.

Warning: *Disconnect the machine from the mains electricity supply before removing the trimmer cover assembly.*

Replacing Fuses

Your DocuMaster MFC is fitted with two fuses at each of the mains inputs. If either of these fail the machine will not power up.

Caution: *The system uses double-pole/neutral fusing (i.e. two fuses). When removing any covers or changing fuses - always first disconnect the machine from the mains electricity supply by switching off and unplugging the machine*

- Unplug the mains input lead and open the flap on the fuse holder
- Pull out each fuse casing in turn and check the fuse
- Replace if necessary with a fuse of the correct specification, as detailed below.

Machine	Part No.	Description
DocuMaster MFC Drive Unit, 240V	730-018	Fuse, 1.25" (32mm) 7.0A HRC (Quick Acting, F)
DocuMaster MFC Drive Unit, 115V	730-020	Fuse, 1.25" (32mm) 10.0A HRC (Quick Acting, F)
Booklet Maker, 240V	730-016	Fuse, 1.25" (32mm) 5.0A HRC (Quick Acting, F)
Booklet Maker, 115V	730-103	Fuse, 1.25" (32mm) 10.0A HRC (Anti Surge, T)

TABLE 1.

Error Messages

Under certain error conditions a message will be displayed on the control panel. Some of the error messages will refer to an individual bin or module address. In this case the relevant module number will appear where # is shown below.

Error Message	Meaning
Bin # double	A double feed error has occurred on the bin detailed. This means that the bin has fed two sheets of paper, instead of one. Check and correct the faulty set and restart the machine. If the error persists see the Problem Solving section of this manual.
Bin # empty	The paper tray of the bin detailed is empty. Reload the bin and touch **INCH** to continue the job. (Touch ⏻ to continue the job when using the DocuMaster MFC offline.)
Bin # jam	A paper jam has occurred in the bin detailed. Touch **INCH** to clear any partial sets from the conveyor. If the error persists see the Problem Solving section of this manual.

Error Message	Meaning
Bin # lift error	(Suction feed bin only) Too much paper has been loaded into the bin (note that the grey button will not raise or lower the tray). Remove the stock and reload a smaller quantity.
Bin # miscal	A feed/sensor error has occurred during the test set. The bin will recalibrate automatically, but check the very first set for errors.
Bin # miss	A miss feed error has occurred on the bin detailed. This means that the bin did not feed a sheet in the last set. Check and correct the faulty set and restart the machine. If the error persists see the Problem Solving section of this manual.
Bin # overload	An obstruction in the bin is preventing it from lifting correctly. Check and remove any obstructions. It may be that the stock has not been pushed fully forward into the bin.
Bin # part reset	It is necessary to switch the machine off and then on again after 10 seconds before running another test set. If this problem persists, contact your supplier.
Bin # trailing	A trailing feed error has occurred on the bin detailed. This can mean one of two things: 1) The sheet from this bin was delivered late (trailing single feed) 2) An extra sheet was delivered from this bin, slightly behind the first sheet (trailing double feed) If the problem persists see the Problem Solving section of this manual.
Bin programming error	The bins in the DocuMaster MFC have not initialised properly. Switch the machine off and then on again. If the problem persists, contact your supplier.
Bin reset	An error has occurred in the electronics of the bin detailed. Any number over 16 relates to a module other than a bin. Restart the machine. If the problem persists, contact your supplier.
Cannot start fold axis changing	The fold axis (size adjustment) of the booklet maker is in the process of adjusting. Wait for the booklet maker to finish before touching **INCH**. (Touch ⓘ to continue the job when using the DocuMaster MFC offline).
Cannot start sheets axis changing	The sheets axis (book thickness adjustment) of the booklet maker is in the process of adjusting. Wait for the booklet maker to finish before touching **INCH**. (Touch ⓘ to continue the job when using the DocuMaster MFC offline).
Cannot start tray down	(Suction feed bin only) One of the trays has been lowered by the operator. Press the grey button on the bin controls to raise the tray. Press ⓘ.

Error Message	Meaning
Cannot start tray empty	One of the switched-on bins was empty when ⏻ was touched. Fill the bin with paper and touch ⏻ again.
Cannot start trim axis changing	The trim axis (size adjustment) of the trimmer is in the process of adjusting. Wait for the trimmer to finish before touching ⏻.
Cannot start width axis changing	The width axis (size adjustment) of the DocuMaster MFC is in the process of adjusting. Wait for the booklet maker to finish before touching ⏻.
Change feed output to front	The tower's base is not set up correctly for the current job. Change the paper path to feed to the front of the tower.
Change feed output to rear	The tower's base is not set up correctly for the current job. Change the paper path to feed to the rear of the tower.
Change feed path down	The tower's base is not set up correctly for the current job. Change the paper path to feed down.
Check fuse	A fuse may have blown in the drive unit. Contact your supplier.
Conveyor jam	A paper jam has occurred in the bottom of the conveyor. Clear the jam. Touch **INCH** to clear any partial sets from the conveyor.
Creaser Error	There is an Error in the Creaser module: 1 - Sheet was shorter than expected. 2 - Sheet was longer than expected, possible jam 3 - Job data queue overflow (Too many sheets stored) 4 - Creaser blade initialisation failed or the blade did not cycle 5 - Blade clip out error 6 - Job data queue under flowed 7 - Invalid job data arrived back from the Vario or time out 8 - Only one of the skew sensors was covered. 9 - The machine is running too fast to stop for the next crease 10 - Unknown Creaser error
Creaser Jam	There is a paper jam in the Creaser module.
Emergency stop	The emergency stop button has been pressed. Turn the emergency stop button clockwise to release it.
Fuse blown	A fuse has blown on the Motor Drive PCB in the drive unit. Contact your supplier.

Error Message	Meaning
Fuses blown	Fuses have blown on the Motor Drive PCB, in the drive unit. Contact your supplier.
Initialising bins	The bins in the DocuMaster MFC are being checked. If this message appears regularly, contact your supplier.
Motor stalled	There may be a bad jam causing the conveyor to lock. Clear the jam. Touch **INCH** to clear any partial sets from the conveyor. If the DocuMaster MFCDocuMaster MFC does not restart, a fault may have occurred in the drive unit: Contact your supplier.
No power to stacker	Check that the stacker is plugged into a suitable mains supply, and is switched on.
No response	The bins in the DocuMaster MFC have not initialised properly. Switch the machine off and then on again. If the problem persists, Contact your supplier.
Output path deflector changed	The paper path has been altered on the tower's base. Select the correct paper path before restarting the job.
Power fail	The mains supply has been interrupted. Switch the DocuMaster MFC off and on again.
PSU voltage error:	There is a voltage error. Contact your supplier.
Rear cover open	Check the rear cover/guard is fitted and is actuating the safety switch correctly.
Remote stop	The DocuMaster MFC has stopped because there is a problem with ancillary equipment to which it is linked. Clear the problem with this equipment before restarting the job.
Set size wrong	The wrong number of bins are switched on for the job specified in Multiset. The number of bins switched on must be a multiple of the number of sheets in a set.
SFT jam	There is a paper jam in the booklet maker. Open the booklet maker and remove the jam.
SFT stalled (BMP/TMP only)	There is a paper jam in the booklet maker. Open the booklet maker and remove the jam.
Staple head err	A fault has occurred in the booklet maker. Turn the mains switch off and then on again. If the problem persists contact your supplier.
Staple head error	There has been a staple head error in the booklet maker. The heads should self-clear. If they do not, turn the booklet maker off and on again to free the head. If this does not work contact your supplier.

Error Message	Meaning
Staple heads offline	The staple heads are not selected on the booklet maker. To select the staple heads, press the Staple Head Select button on the booklet maker. The staple head indicator lights on the booklet maker show which heads are selected.
Stapler Guard Open	The top cover of the rear corner stapler is open. Close the cover.
Stapler Jam	A paper jam has occurred in the rear corner stapler. Lift the top cover and clear the jam.
Staples low	A staple cartridge in the booklet maker needs replacing. Fit a new staple cartridge.
Stitch guard open	The top cover of the booklet maker is open. Close the cover.
Touch START to clear machine	There may still be paper in the conveyor. Touch ⓘ to clear the machine before starting a new job.
Tray lift error	(Friction feed bin only) There is a fault with the tray lowering mechanism. Contact your supplier.
Tray lift error	(SlimVAC bin only) One of the trays has not lifted. Try unloading and reloading the bin. If this does not work, press the emergency stop switch and allow 10 seconds before releasing it. If the problem persists contact your supplier.
Trim bin full	The trimmer offcut bin is full. Empty the offcut bin.
Trim Bin Open	The Trimmer offcut bin is not fitted or is not contacting the safety switch. Fit the offcut bin correctly.
Trim guard open	The trimmer cover is open and should be closed.
2xDivert	Two successive diverts (i.e. two errors) have occurred from the same bin. Check the bin is feeding correctly.

CHAPTER 7 Safety Information

Your DocuMaster MFC has been designed with safety as a key feature and in accordance with international safety standards.

Please read and observe the following safety rules.

Warnings and Cautions

Where warnings and cautions are given in the body of this manual, they are identified by a warning triangle.

Warning: *Warning messages alert you to a specific procedure or practice which, if not followed correctly, could cause serious personal injury.*

Caution: *Caution messages appear before procedures which, if not observed, could result in damage to the equipment.*

Safety Rules

- Do not carry out any maintenance procedures other than those documented in this manual
- Do not remove any screws, fixings or covers, other than when told to do so in this manual
- If a procedure requires removing covers or changing fuses, always first disconnect the machine from the mains electricity supply by switching off and unplugging the machine
- Do not modify the machine in any way. This may affect safe working and will invalidate your warranty
- Do not do anything to interfere with the safety cut-out switches fitted to some machine covers
- Do not block air ventilation grilles on the machine
- Do not use the machine if it is making unusual noises. Disconnect the machine from the mains electricity supply and call your service engineer

Installation

- The installation of your DocuMaster MFC requires specialist knowledge and should therefore only be carried out by a supplier approved engineer
- The DocuMaster MFC must only be plugged into an electrical supply line of the correct voltage and with a proven earth. Any damage caused by failure to do so will not be covered by the guarantee. The required machine voltage is shown on the label on the rear of the DocuMaster MFC and the rear of the booklet maker
- Allow sufficient working space around the machine
- Take care when moving machinery and observe safe lifting practices

Trimmer Guillotine

- The trimmer unit contains a motorised guillotine. It is therefore essential that due care is taken and the operating instructions adhered to when using the unit. Also pay particular attention to any specific warnings given

CHAPTER 8 Specifications

Intended Use	The DocuMaster MFC is intended for feeding, stapling, folding and trimming materials as specified below.
Operating Conditions	10-35°C at 35-85% relative humidity Up to 2000m above mean sea level
Configuration	1 x friction feed and 3 x SlimVAC feed stations, with online booklet maker and trimmer
Production	Dependent on operating mode and finishing option
Stock Sizes	Min: 140 x 210mm (5.5” x 8.3”) Max: 320 x 450mm (12.6” x 17.75”
Stock Range	80 - 300gsm (80 - 240 SlimVAC) Coated paper: 90gsm minimum
Max. Book Thickness	22 sheets (80gsm)
Max. No. Creases/Sheet	3 (centre + 2 hinge creases)
Detection	Electronic detection for miss, double, jam and empty bin
Dimensions	
Width	693mm, 27.3"
Length	1960mm (78”) with booklet maker, trimmer and outfeed.
Height	2120mm (84”)
Weight	399Kg, 878lb
Electrical	105-127V 60Hz or 208-254V 50Hz; single phase

Radio Frequency Emissions	This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

As part of our continued product improvement plan, the specifications and information published in this manual are subject to change without notice.
All specifications are dependent on application, type of stock, temperature, RH and print engine used.
Specifications quoted were measured on uncoated and unprinted stock. E&OE.

CHAPTER 9 Declaration of Conformity

DECLARATION OF CONFORMITY
2006/42/EC

Name of Manufacturer:	Morgana Systems Limited
Address of Manufacturer:	Davy Avenue, Knowlhill Milton Keynes, Buckinghamshire. MK5 8HJ United Kingdom
Description of Product:	Automatic Multi Feed Paper Creasing and Gathering Machine
Model and Serial Number:	MORGANA DocuMaster MFC
Year of Manufacture:	2011

Conforms to the following Product Specifications:

Safety:	73/23/EEC and 89/392/EEC Council Directive 'on the approximation of laws of Member States relating to machinery' amended by 91/368/EEC BS EN 60950 1992
EMC:	89/336/EEC Council Directive 'on the approximation of laws of Member States relating to electromagnetic compatibility' EN55022: 1995 Class A EN 50082-1: 1992 IEC 801-2 (1991) 8kV AD IEC 801-3 (1984) 3V/m IEC 801-4 (1988) 0.5kV SL, 1kV PL
Authorized Representative:	P Garratt - Director

Address:	Davy Avenue, Knowlhill Milton Keynes, Buckinghamshire. MK5 8HJ United Kingdom
Declaration:	I declare that as the authorised representative, the above information in relation to the manufacture of this product is in conformity with the stated standards and with the provisions of the essential health and safety requirements of the stated directive.
Signature of Authorised Representative:	.....

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